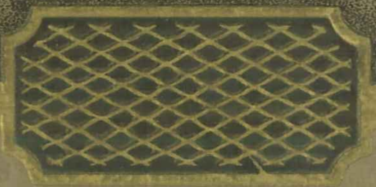
The MILCOR MANUAL



MILCOR
FIREPROOF
BUILDING PRODUCTS

MILWAUKEE CORRUGATING
COMPANY
MILWAUKEE, WISCONSIN

The
MILCOR MANUAL

A Data Book

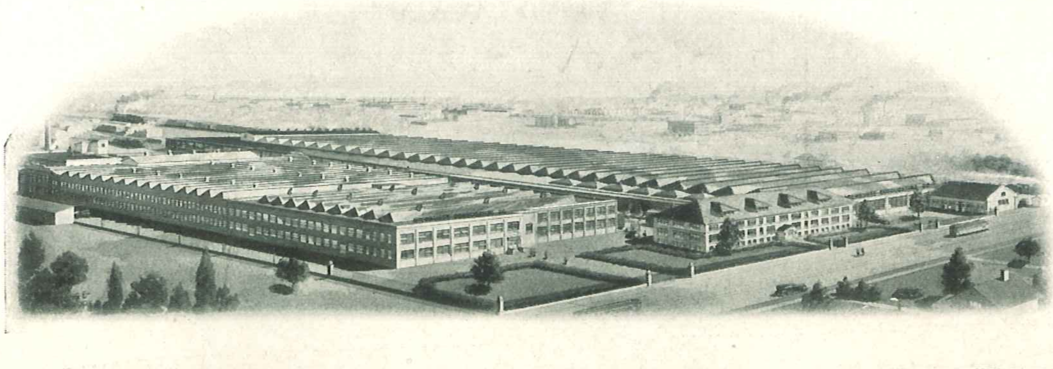
on Milcor Materials and Methods, including
Engineering Tables, Details, Specifications
and General Information Regarding Milcor
Stay-Rib and Netmesh Expanded Metal
Lath, Expansion Corner Bead and
Casings, Steel Domes, Channels
and Other Fireproof
Building Products

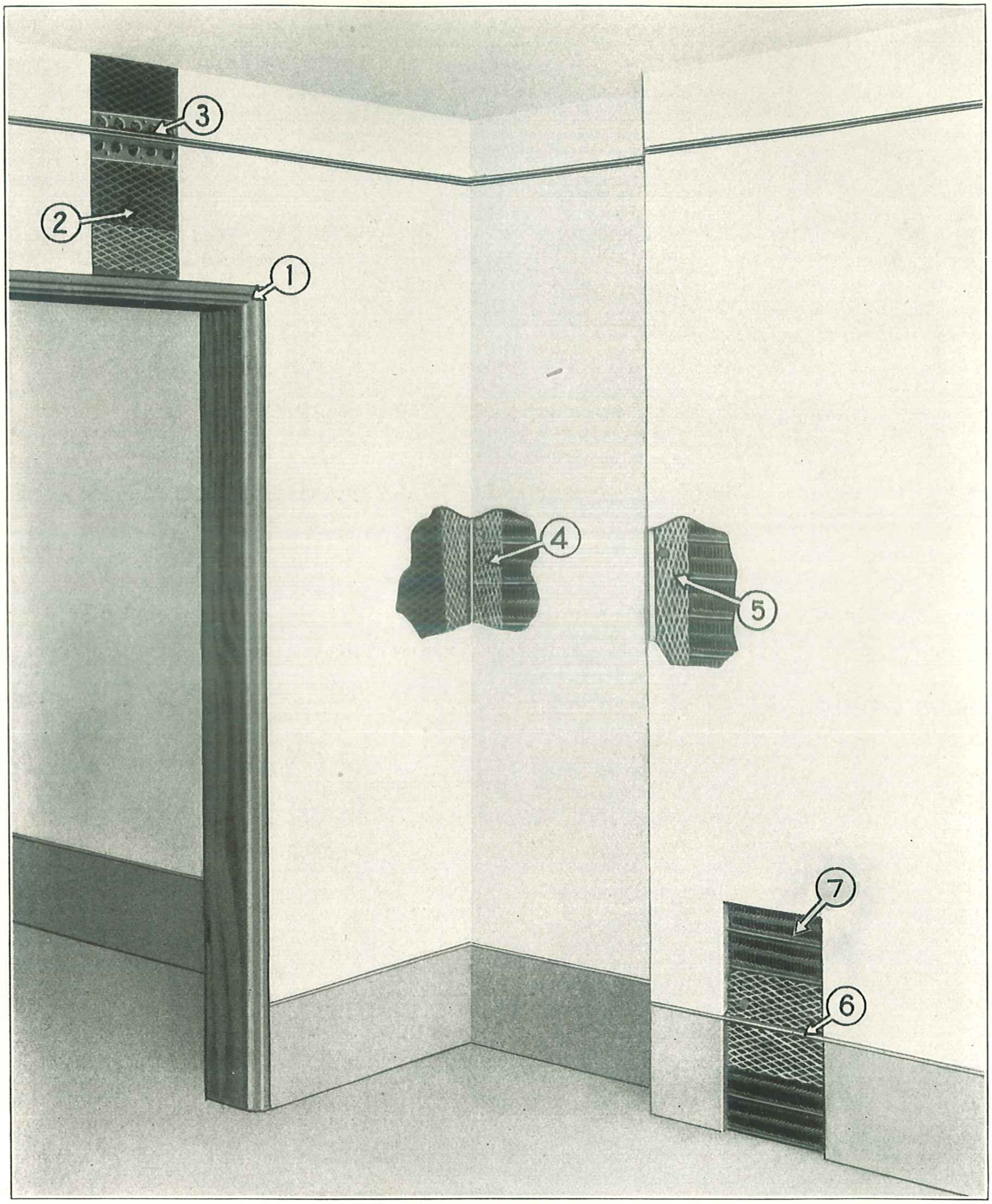
Approved Architects' Specifications, Pages 54 to 63
Index on Last Page

Catalog No. 20

MILWAUKEE CORRUGATING COMPANY
MILWAUKEE, WISCONSIN

KANSAS CITY, MO. LA CROSSE, WIS. MINNEAPOLIS, MINN.





Crackproof, Fireproof, Artistic and Permanent

Reference Numbers Indicated Above

No. 1 — Milcor "Expansion" Door and Window Casing.
No. 2 — Milcor "Netmesh" Diamond Expanded Metal Lath.
No. 3 — Milcor Concealed Metal Picture Molding.
No. 4 — Milcor "Expansion" No. 2 Inner Corner Bead.
No. 5 — Milcor "Expansion" No. 1 Outer Corner Bead.
No. 6 — Milcor "Expansion" No. 3 Flush Base Screed.
No. 7 — Milcor "Stay-Rib" Metal Lath No. 1.

MILCOR
MATERIALS and METHODS for FIREPROOF CONSTRUCTION

Broadening the Architectural Scope

Frequently you will have occasion to consult this Manual for the Data it contains: *Detailed Descriptions* of the Milcor line of Metal Building Products — *Standard Specifications* for Fire-proof Structures, in convenient form for embodiment in Architectural Specifications — *Engineering Tabulations* on Milcor Steel Dome Construction and other practical information.

MUCH credit is due the architectural profession for fostering standards which combine fire-safeness and sanitation with artistic effects and maximum endurance for all types of structures. Efforts to meet these high standards in the most practical manner, have resulted in important inventions — new adaptations of metal in Milcor Building Products.

And with these products new methods, which reduce construction costs, have been made possible — buildings of all types can be made fire-safe without prohibitive increase in price — structures more sturdy though lighter — dwellings safer, more sanitary, enduring and beautiful!

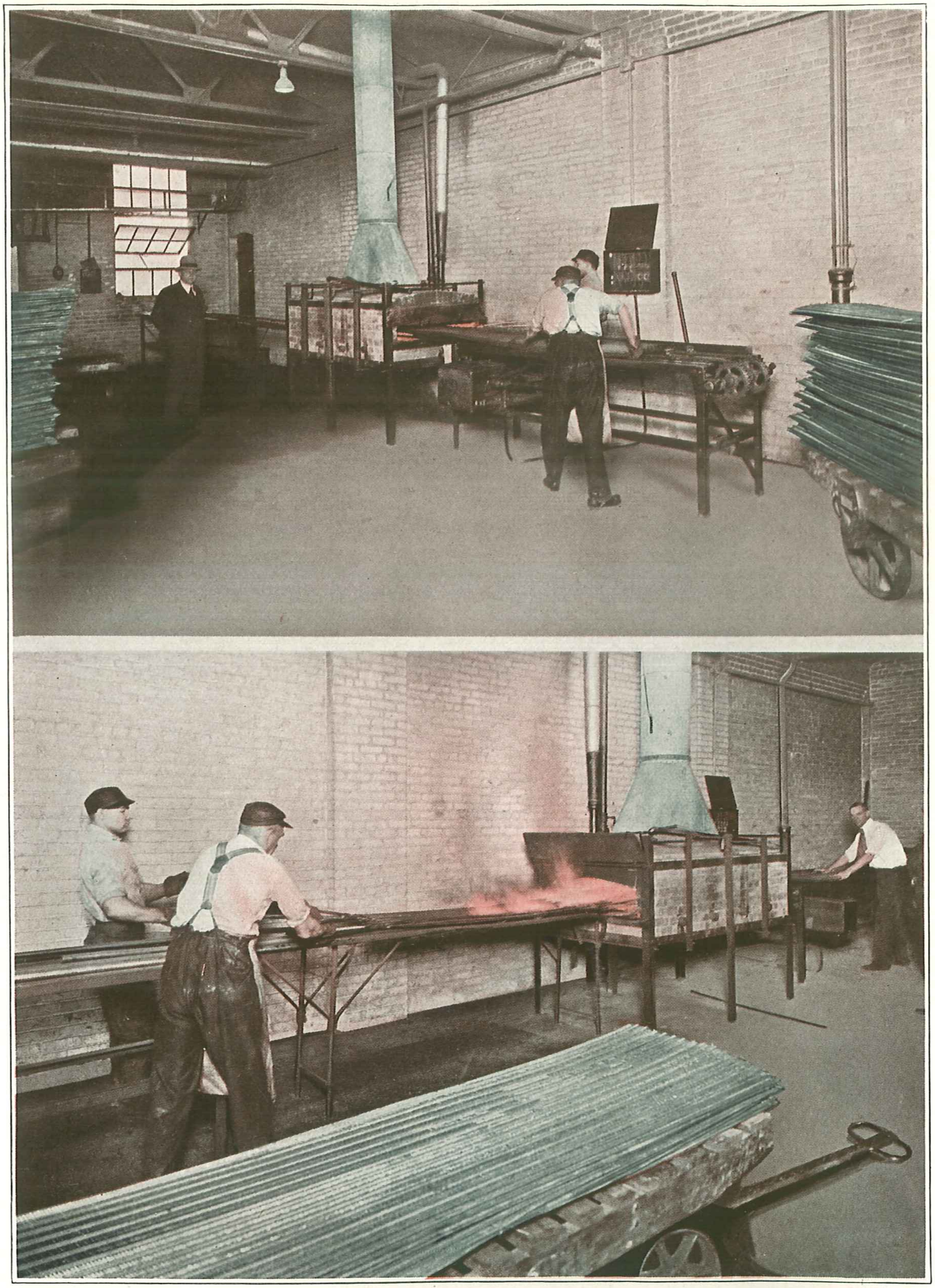
Architects have recognized in these Milcor Products the ideal means to the attainment of their standards. They are specifying these materials to obtain effects and results not possible with any other medium.

Backed by years of experience in the development and production of modern, fire-safe building materials, the Milwaukee Corrugating Company, with its extensive facilities, offers positive assurance of uniform high quality and unequalled service in this extraordinary line of products.

More than merely meeting the requirements, the Milcor Line actually has broadened the creative scope of American Architecture.

President.

Milwaukee Corrugating Company



In Special Furnaces like these, the Milcor Heat-Treating and Reannealing Process is accomplished efficiently.

MILCOR
Expansion Metal Lath

NO longer can any logical reason be offered for not building every structure fire-safe. Considering the reasonable initial cost of Milcor Metal Lath and the saving in labor made possible by the convenience and increased speed in erection, expense is no longer an element unfavorable to this modern type of construction.

Economical and effective is this metal lath method — effective even with wood frame construction. And it is fire-safe! Impressive proof of this is indicated by the fact that metal-lathed wood-joist floors and wood-stud walls, gypsum plastered, have been given a full "One-hour Rating" by the Underwriters' Laboratories, after exhaustive tests.

Milcor-lathed walls and floors can be relied upon to confine even a severe fire, for at least an hour, to the room in which the blaze originates, without danger of spreading to other parts of the structure. Such a barrier to flames is effective — it insures plenty of time to get fire-fighting facilities to the scene.

The first fifteen minutes, in ordinary buildings, are the most critical for the average conflagration. But Milcor-lathed walls are fire-safe for at least four times as long as that — real fire retardants for at least one hour!

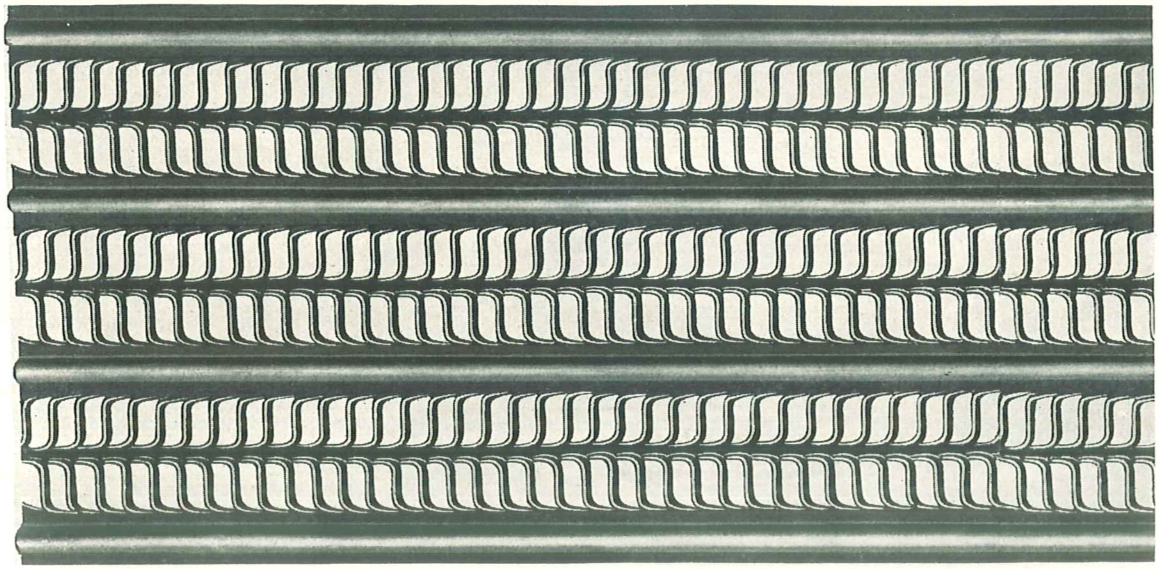
In addition to the fire protection furnished, Milcor Metal Lathed walls and ceilings will *remain free* from cracks. Wooden lath, swelling and warping when the wet plaster is applied — shrinking again as the plaster dries out — creates strains which are certain to show up in cracks and loosened plaster. There are no such strains in the metal lath method — the network of Milcor Lath closely knits and firmly binds the entire surface and makes cracking practically impossible. Nor are Milcor-lathed walls or ceilings subject to "striping" — that barlike blemish which often is unavoidable on wooden-lath-plastered walls.

In sound-proof qualities, Milcor Metal Lathed solid plastered two-inch partitions are superior to other types of wall construction — even more sound-proof than hollow-wall construction.

Acoustical characteristics of Milcor-lathed walls are excellent. Sound-proof and free from internal vibrations, there is practically no "sound board" effect, no clashing echoes or reflecting sounds. The superiority of this construction for auditoriums is an established fact. For instance, in the Auditorium of the College of Industrial Arts, Denton, Texas, where Milcor Metal Lath was used, the acoustical properties are said to be equal to those of the famous Mormon Temple, at Salt Lake City.

All MILCOR Lath is heat-treated and reannealed *after forming*. This heat-treating process is important. The electrons, or steel molecules, become displaced through the strain of cutting and expanding the steel sheets. Heat-treating relieves the stress and brings the electrons back to their original positions. This process results in greater toughness and longer life of the metal. The MILCOR Annealing Process provides a highly efficient method for accomplishing the desired result on enormous quantities of metal lath at a minimum production cost.

This super-care in manufacture and our exceptionally fine facilities give Milcor Expanded Metal Lath its consistently high quality.



Stay-Rib Lath No. 1, Black Asphaltum Painted.

MILCOR
Stay-Rib Metal Lath No. 1

THE saving in material and labor-cost of erection, in addition to supreme utility value, make Milcor Stay-Rib Metal Lath the most practical base material available for either plaster or stucco work, interior or exterior.

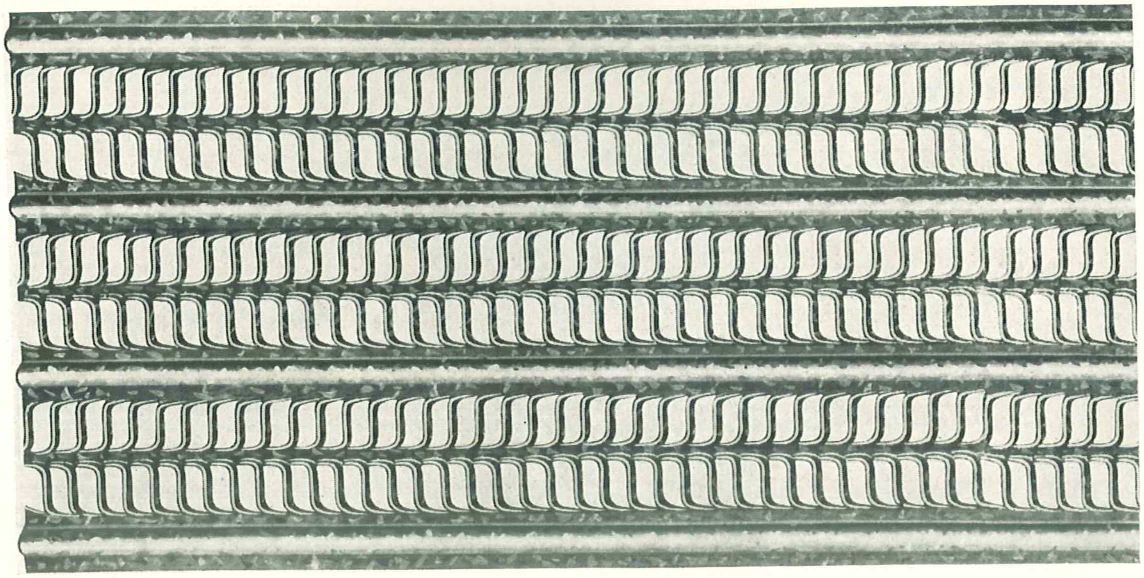
Milcor Stay-Rib No. 1 is designed for maximum rigidity and economy. It is self-furring and an ideal carrier for plaster or stucco. The longitudinal Ribs, or Beads, ½ inch wide, are spaced 1¾ inches center to center and are inter-connected at ¼-inch intervals by stays, or strands. These strands, in turn, are reinforced strongly at their centers by a stiffening member.

Each bundle of Milcor Stay-Rib is marked with a metal tag, as illustrated here, indicating the weight per square yard.

An exclusive Milcor Expansion Process, possible only on the special machinery designed and built by Milcor Engineers, is responsible for the ideal Stay-Rib design — a design which presents an extraordinarily large surface of metal, so facilitating the plastering work as to permit *scratching in and doubling up from* one scaffold — practically two-coat work. This contributes a very worth-while saving in time and labor. Materials, too, are saved, because the wide metal surface presented requires less plaster than other types of lath.

Such superior rigidity is accomplished through this unique Stay-Rib design that extra-wide spacing of studs and joists is permissible — which is another of the important savings in both labor and material, accomplished through the use of Milcor Stay-Rib Lath. It actually is as stiff or stiffer than heavier lath of other design or type.

There are no jagged points on Stay-Rib, to cut or scratch the hands of workmen. They find it easy to handle while erecting



Stay-Rib Lath No. 1 Cut from Tight Coat Galvanized Sheet.

as well as convenient and safe to plaster over.

For ceiling work, Milcor Stay-Rib is unequalled. The rigidity of its Ribs and the character of its expanded design, are big factors in preventing plaster from falling during application. For suspended ceilings, Stay-Rib's stiffness again saves money — fewer channels and less labor are required because spacing can safely be much wider.

For tiled walls of lavatories and for wainscoting or other construction of similar requirements, the stiffness of Stay-Rib is of vital importance to the permanence of the work.

Milcor Stay-Rib Metal Lath No. 1, is manufactured from the following quality materials:

Cut from black, Open-Hearth sheets, painted asphaltum black.

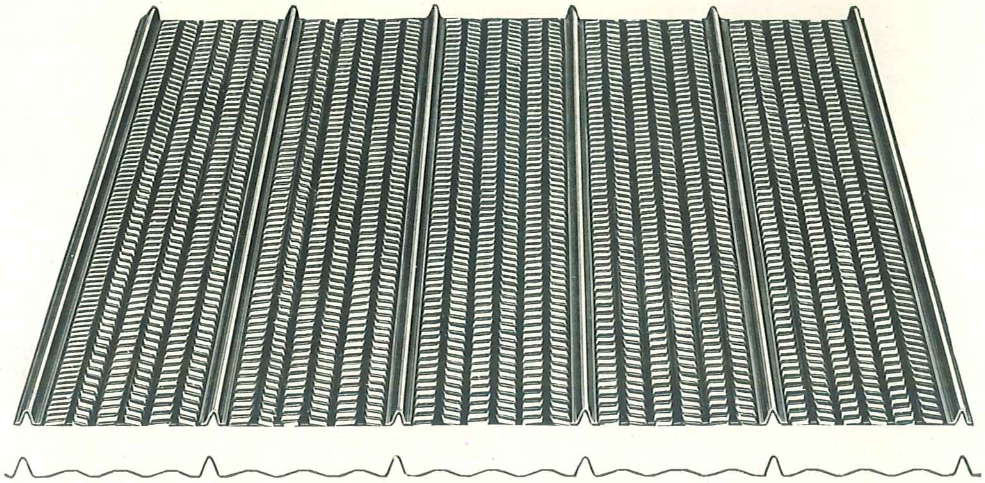
Cut from Tight-Coat Galvanized Open-Hearth sheets.

Cut from Coppered Metal sheets — either galvanized or black — highly efficient in rust resistance and eminently adapted to exterior stucco work.

All painted lath is heat-treated and reannealed after cutting.

Milcor Stay-Rib Metal Lath No. 1

TYPE	Weight per Square Yard Pounds	Size of Sheets Inches	Number of Sheets in Bundle	Square Yards in Bundle	Weight per Bundle Pounds
Cut from open-hearth steel sheets, painted.	2.75 3.50	24 x 96 24 x 96	9 9	16 16	44 56
Above also furnished cut from Coppered rust-resisting Metal. All our painted lath is heat-treated and reannealed after cutting, which gives the metal longer life and greater tensile strength.					
Cut from galvanized open-hearth steel sheets.	3.60	24 x 96	9	16	57



MILCOR
⅜ Stay-Rib Metal Lath No. 2
An Extra Rigid, Self-furring Metal Lath for Greater Strength and Economy in Construction

THE heavy ⅜-inch ribs of MILCOR ⅜ Stay-Rib Lath No. 2, spaced 4.8 inches center to center, with five stiffening members between ribs as reinforcing for the connecting strands, furnish great rigidity and permit still wider spacing of supports than is usual with Stay-Rib No. 1.

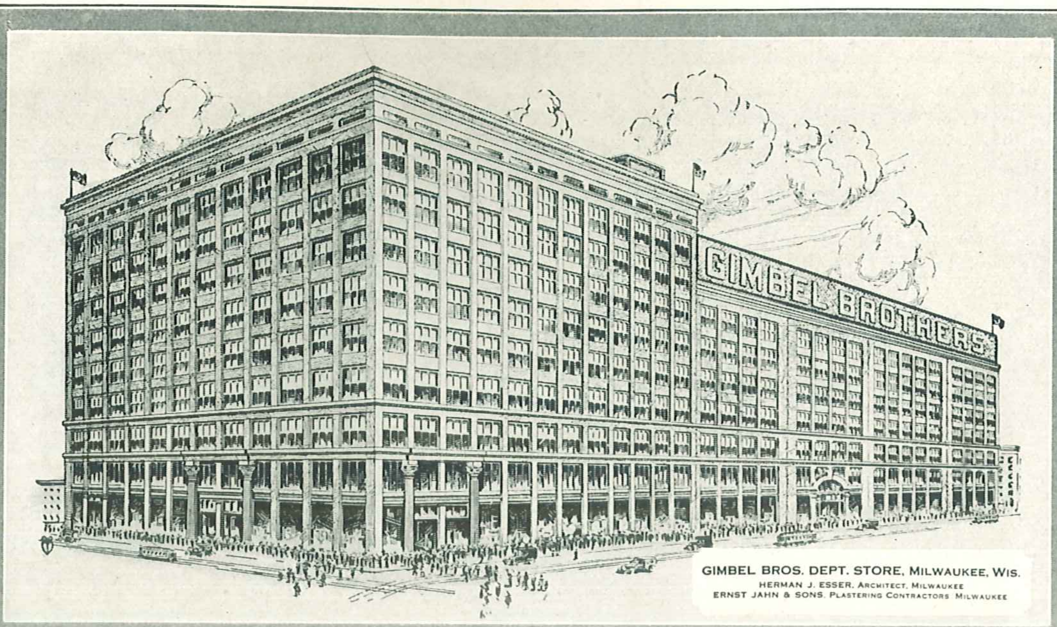
This ⅜ Stay-Rib No. 2 is ideal for all purposes where a self-furring lath is required. Attached to joists or studs with the ribs facing in and at right angles to them, it is used extensively for ceiling work, the possibility of wide spacing of channels effecting real economies in both labor and material.

MILCOR ⅜ Stay-Rib Lath No. 2 is also used a great deal for concrete construction, usually in connection with MILCOR Steel Domes, as described on pages 37 to 45, or with metal lumber. With the latter, it is attached above and below, providing perfect, rigid, fire-safe construction at minimum cost.

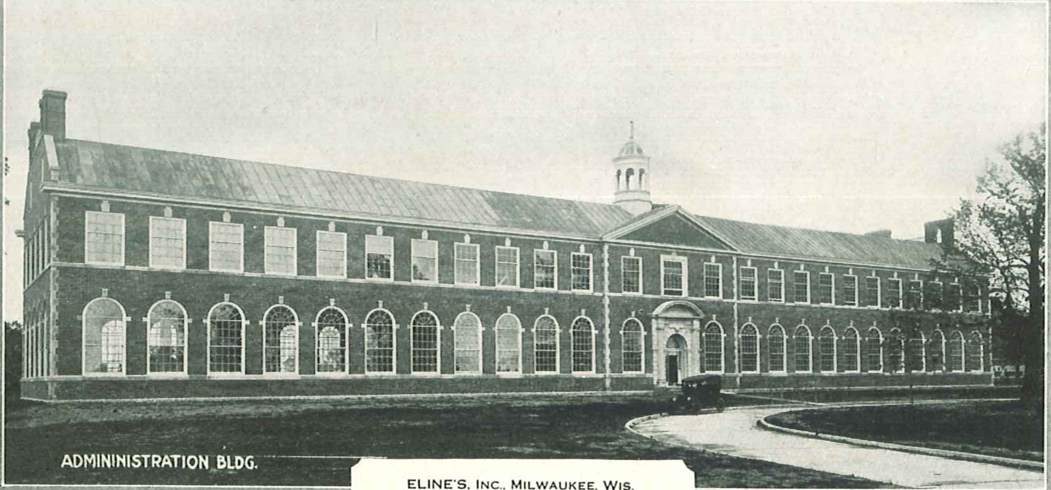
MILCOR ⅜ Stay-Rib Lath No. 2 is given characteristic Milcor care in manufacture. After cutting, it is heat-treated and reannealed, relieving any internal stresses that might have resulted in the expanding process. It is produced from black open-hearth sheets painted black, from Galvanized Sheets, and from rust-resisting Coppered Metal.

Milcor ⅜ Stay-Rib Metal Lath No. 2

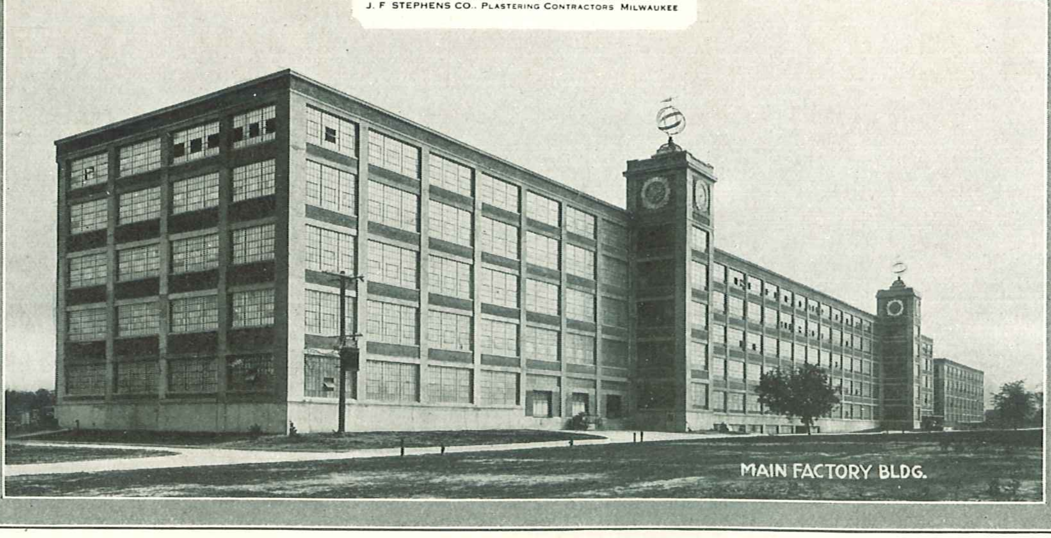
TYPE	Weight per Square Yard Pounds	Size of Sheets Inches	Number of Sheets in Bundle	Square Yards in Bundle	Weight per Bundle Pounds
Cut from open-hearth steel sheets, painted.	2.75 3.50 4.10	24 x 96 24 x 96 24 x 96	9 9 9	16 16 16	44 56 66
Above also furnished cut from Coppered, rust-resisting Metal. All our painted lath is heat-treated and reannealed after cutting, to give the metal longer life and greater tensile strength.					
Cut from galvanized open-hearth steel sheets.	3.60	24 x 96	9	16	57



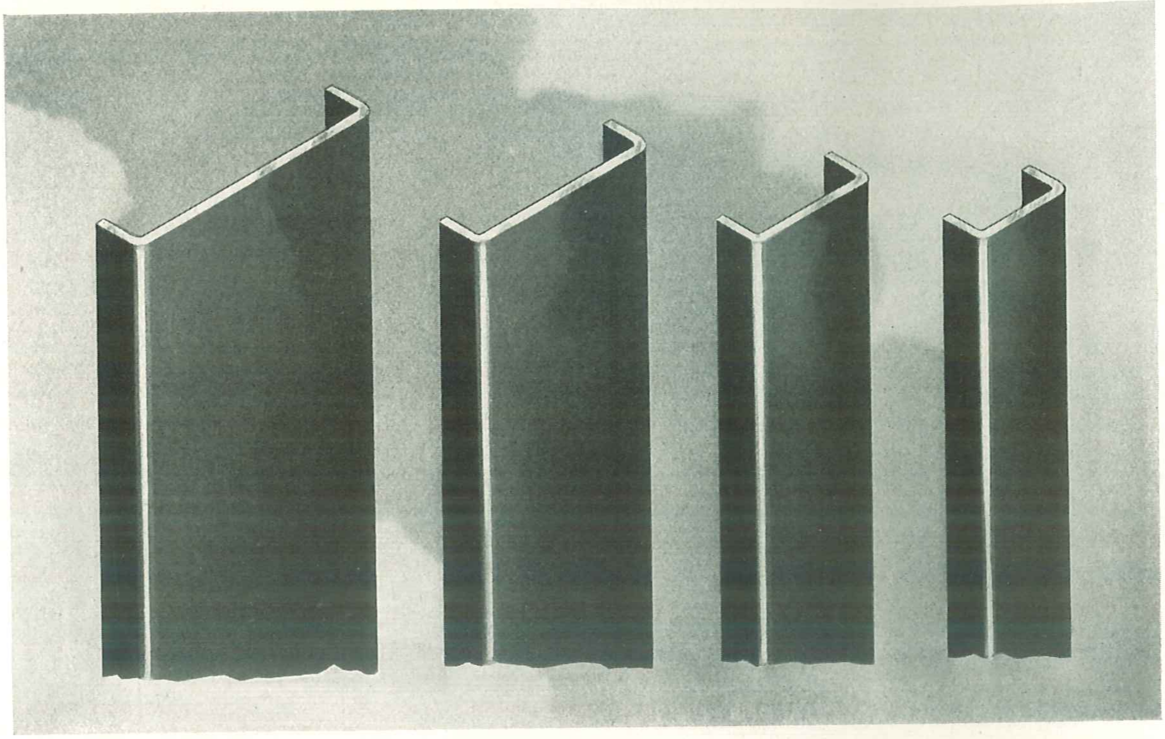
GIMBEL BROS. DEPT. STORE, MILWAUKEE, WIS.
HERMAN J. ESSER, ARCHITECT, MILWAUKEE
ERNST JAHN & SONS, PLASTERING CONTRACTORS MILWAUKEE


ADMININISTRATION BLDG.

ELINE'S, INC., MILWAUKEE, WIS.
KIRCHOFF & ROSE, ARCHITECTS, MILWAUKEE
J. F STEPHENS CO., PLASTERING CONTRACTORS MILWAUKEE


MAIN FACTORY BLDG.

Milcor Products were used in these handsome Milwaukee Buildings.



Milcor Cold Rolled Steel Channels

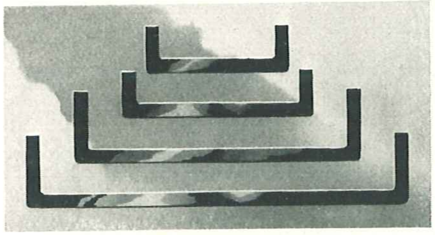
As supporting members for Milcor Metal Lath on solid partitions, on hollow-stud partitions or for suspended ceilings, Milcor Cold Rolled Steel Channels are practical and efficient.

Made of 16-gauge pressed steel, they combine great tensile strength with the advantage of light weight. They provide the desired preciseness and rigidity of support for lath and plaster and thus insure true lines as well as sturdiness.

Because these Milcor Channels are *Cold Rolled*, they are ideal for solid partition and suspended ceiling construction — they are lighter and more easily bent or cut than hot rolled channels.

The legs are accurately pressed at right angles to obtain a level surface on all three sides and to give maximum rigidity, eliminating any tendency to wabble while wiring in place. Milcor Steel Channels are uniform and straight throughout their entire length.

Various adaptations are shown on pages 11 to 13.



Cross Sections showing Milcor ¾, 1, 1½ and 2-inch Milcor Cold Rolled Steel Channels.

The following sizes and weights are carried in regular stock (made in 16-gauge only):

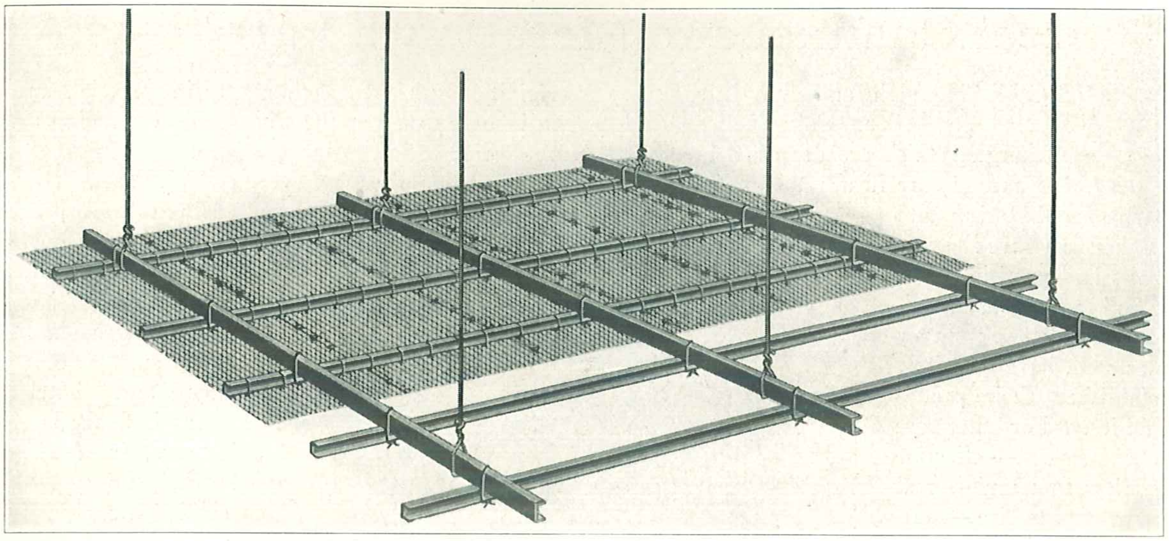
¾ inch — weight per lineal foot — 0.276 lbs.
1 inch — weight per lineal foot — .332 lbs.
1½ inch — weight per lineal foot — .456 lbs.
2 inch — weight per lineal foot — .552 lbs.

Depth of Legs on all Channels, ⅜ inch.

¾-inch Channels are furnished in stock lengths of 12, 14, 16, 18 and 20 feet; packed 20 Channels to a bundle.

1, 1½ and 2-inch Channels are furnished in stock lengths of 16, 18 and 20 feet; packed 10 Channels to a bundle.

Channels 22 feet long can be furnished on special orders.

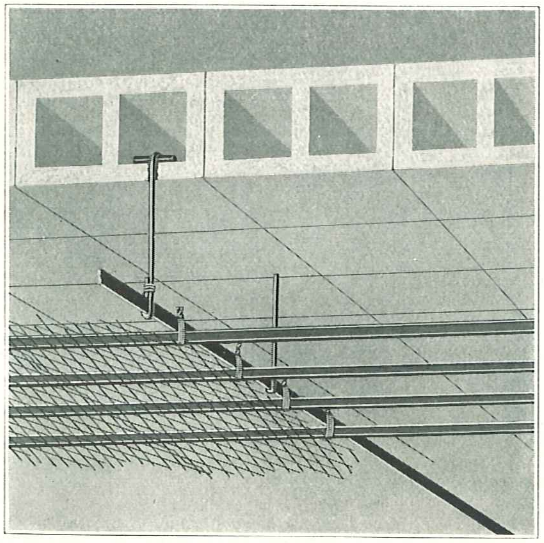


For Suspended Ceiling Construction

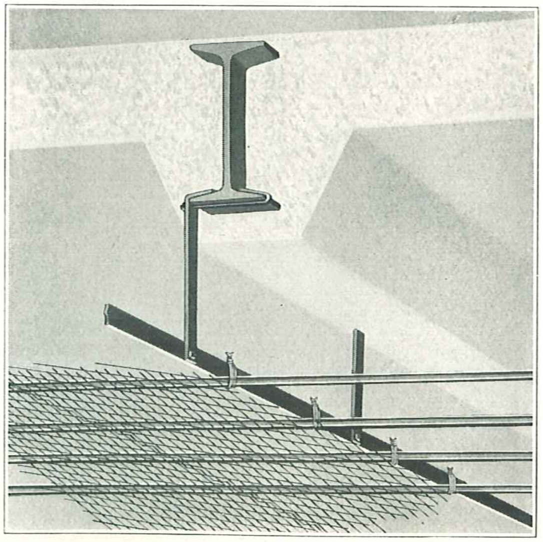
FOR suspended ceilings, Milcor Netmesh or Stay-Rib Lath are highly practical and efficient. Flat steel hangers 1 inch by 3/16 inch, or ¼-inch round steel hangers, spaced not to exceed 4 feet apart, attached to the floor construction, form the support, from which is suspended framing, made up of 1½-inch Milcor Steel Runner Channels crossed by ¾-inch Milcor steel Furring Channels.

Framing is secured to hangers by ⅜-inch bolts where flat steel hangers are used, or by a double twist of the ¼-inch steel rod where rod hangers are used. Round hangers may also be bent at right angles and wired to framing with No. 8 galvanized wire triple-twisted.

Stay-Rib or Netmesh Lath is then wired to framing with No. 18 galvanized wire fastened at 6-inch intervals to channels. An ideal crack-proof, fire-safe, secure ceiling is produced by this method.



Showing method of attaching Milcor suspended ceiling to tile.



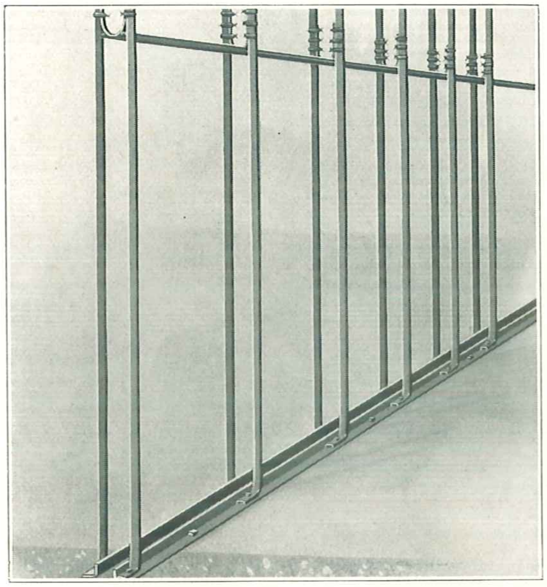
Showing method of attaching Milcor suspended ceiling to beam embedded in concrete.

Steel Channel and Metal Lath Partitions

MILCOR Netmesh and Stay-Rib Lath, erected on Milcor Cold Rolled Steel Channels, which are described in detail on pages 10 and 11, are ideally adapted to solid partition plastering and to hollow steel-stud walls and partitions.

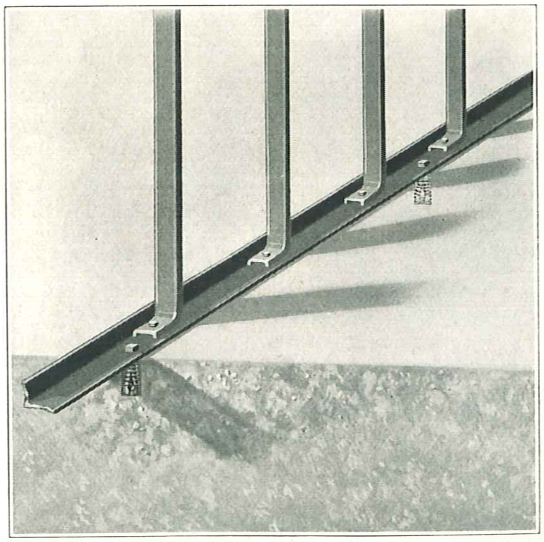
Solid partitions, metal-lathed and properly plastered, have definitely established their practicability. For they are space savers — effective barriers to sound — real retardants to fire — permanently immune to cracking! And they are economical! They are light in weight, too — an important advantage in large structures.

The rigidity of Milcor Stay-Rib and Netmesh Lath permits unusually wide spacing of the channel supports where solid partitions or hollow-stud construction is used in the manner illustrated on these pages. This quality of rigidity results in a saving, both in materials and in labor, as well as the advantage of speeding up the work.

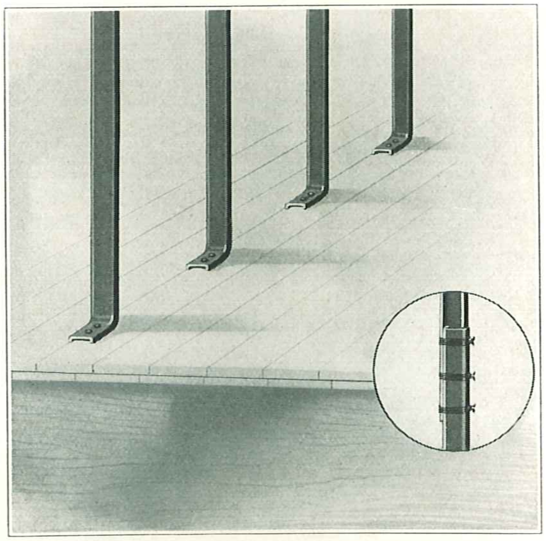


Hollow-stud partition with double sets of Milcor Steel Channels.

The value of saving every possible foot of floor space assumes really practical proportions through the erection of Milcor-lathed 1½-inch or 2-inch solid partitions in large structures, such as office buildings and hotels. The saving in floor space, for instance, in a 250-room hotel, using 1½-inch solid Milcor partitions instead of old type 4-inch partitions would be approximately 3250 square feet. This means a gain of about 14½ rooms at a comparatively negligible construction cost and this gain offers an increased revenue of about 6 per cent — well worth while! If 2-inch solid partitions were used, the gain would be about 11 rooms in a 250-room building with rooms averaging 15 x 15 ft.



Anchoring Milcor Steel Channels in concrete floor for Solid Partition work.



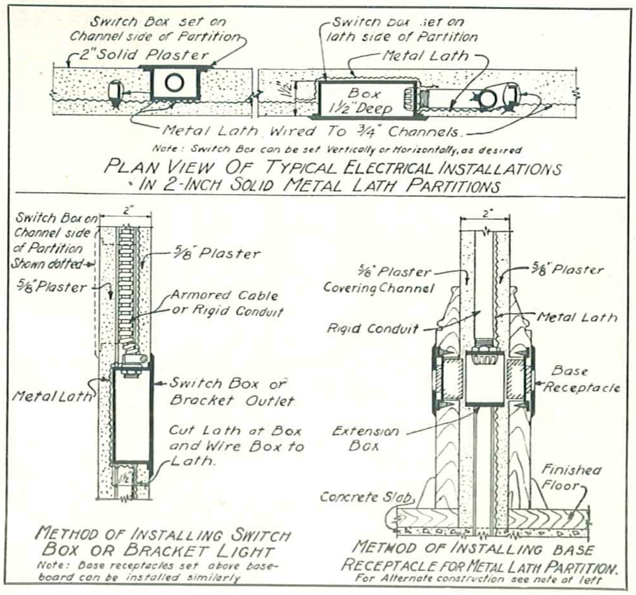
Solid Partition secured to wood floor. Note the spliced ends.

And it has been demonstrated that metal-lathed 1½-inch solid partitions are sound-proof to the highest degree as well as fire-proof and crack-proof. The monolithic, steel reinforced construction of this 1½-inch Milcor-lathed Solid Partition, can be depended upon to sturdily fulfill every requirement for partition-efficiency.

It is generally recommended that the Milcor-Lathed Solid Partitions be plastered to a minimum thickness of 2 inches.

Standard Electrical Equipment

This 2-inch construction has been so generally approved that electrical switches and conduits, properly adapted to this type of wall, have been perfected as standard equipment. See Plan Details above.


Switch Box set on Channel side of Partition
2" Solid Plaster
Switch Box set on lath side of Partition
Metal Lath
1½"
Box 1½" Deep
Metal Lath Wired To ¾" Channels.
2"
Switch Box on Channel side of Partition Shown dotted
5/8" Plaster
5/8" Plaster
Armored Cable or Rigid Conduit
Metal Lath
Switch Box or Bracket Outlet
Cut Lath at Box and Wire Box to Lath.
1½"
2"
5/8" Plaster Covering Channel
5/8" Plaster
Rigid Conduit
Metal Lath
Base Receptacle
Extension Box
Finished Floor
Concrete Slab

Note: Switch Box can be set Vertically or Horizontally, as desired

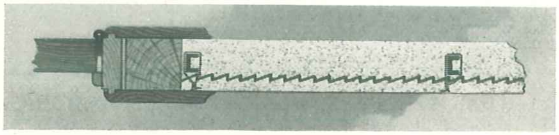
PLAN VIEW OF TYPICAL ELECTRICAL INSTALLATIONS IN 2-INCH SOLID METAL LATH PARTITIONS

METHOD OF INSTALLING SWITCH BOX OR BRACKET LIGHT

Note: Base receptacles set above base-board can be installed similarly

METHOD OF INSTALLING BASE RECEPTACLE FOR METAL LATH PARTITION.

For Alternate construction see note at left



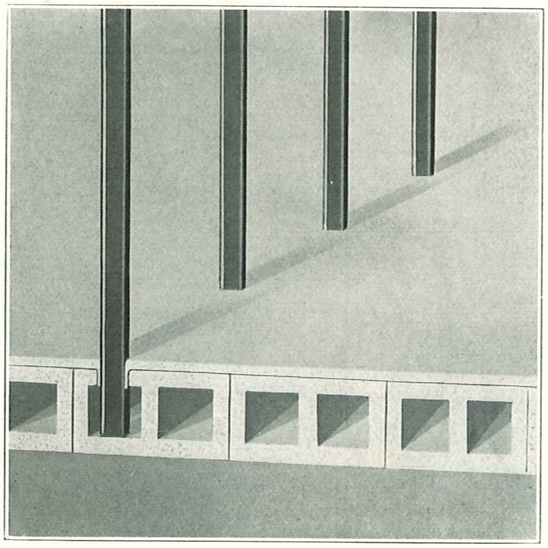
Cross-section of Solid Plaster Partition, showing Milcor Steel Channels and Netmesh Lath plastered.

Hollow Stud Partitions

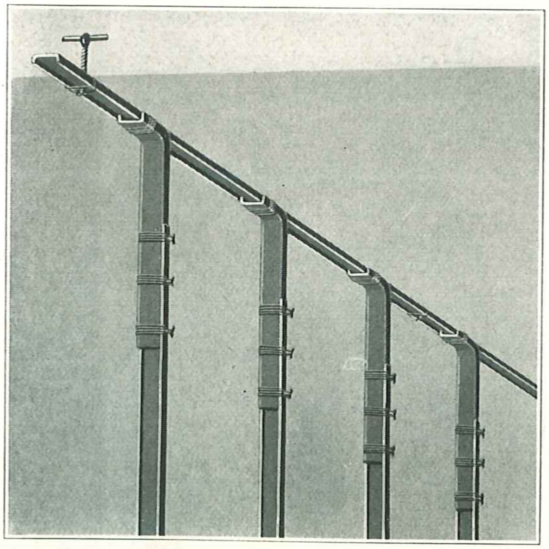
Milcor-lathed hollow-stud partitions on double columns of Milcor Steel Channels offer the most efficient form of hollow partitions wherever water pipes, steam pipes, ventilating or other systems must be concealed within walls.

Such partitions may also be built satisfactorily with wooden studs if Milcor-lathed and properly plastered. The fact that the official tests of the Underwriters' Laboratories place a full One-hour Rating on even such wood construction when plastered on metal lath base, emphasizes the supreme fire-proof qualities of both hollow-stud and solid partitions.

See Standard specifications pages 54 to 63.



Showing method of erecting Milcor Steel Channel Partitions on Hollow Tile Floors.



Showing method of securing Milcor Steel Channel Partitions to concrete ceilings.

DIXIE TERMINAL
CINCINNATI, OHIO

KEITH'S THEATRE
CINCINNATI, OHIO

CITIZENS TELEPHONE EXCHANGE
COVINGTON, KY.

COX THEATRE
CINCINNATI, OHIO

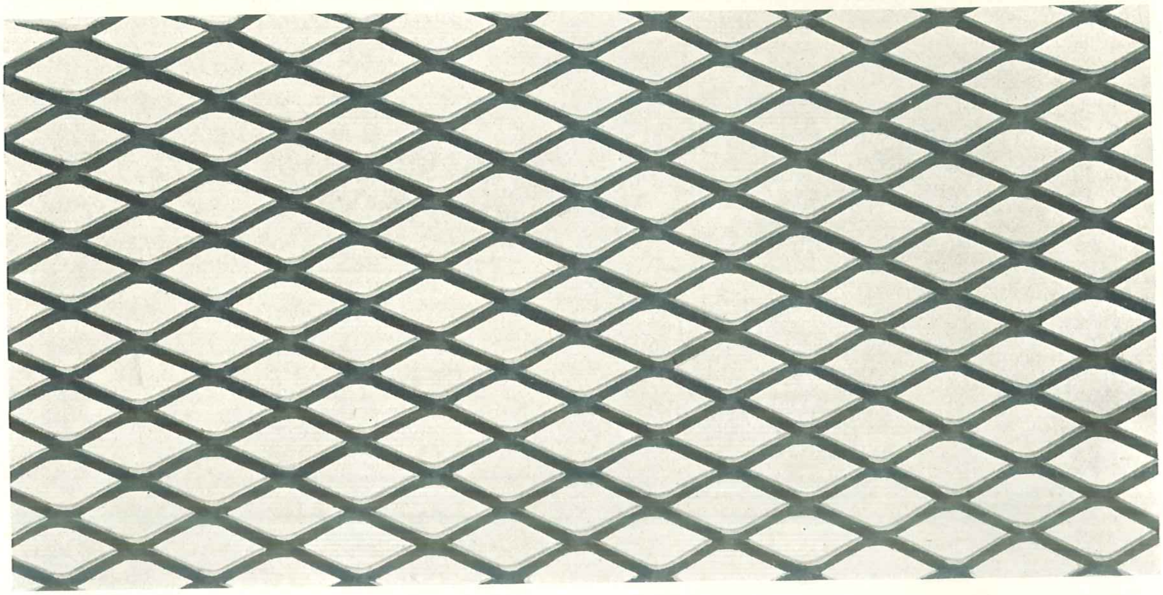
The Stern Plastering Company of Cincinnati installed Milcor Expansion Products in these modern buildings.

WHITTIER APARTMENTS, DETROIT, MICH
CHAS. N. AGREE, ARCHITECT, DETROIT
DETROIT DECORATIVE SUPPLY CO., PLASTERING CONTRACTORS

WADE PARK MANOR, CLEVELAND, OHIO
GEO. B. POST & SONS, ARCHITECTS, NEW YORK CITY
McNULTY BROS. CO. PLASTERING CONTRACTORS, CLEVELAND

Milcor Products used in these ultra-modern Apartment Buildings.

Expansion Corner Bead, Casings, Base Screed and Flashing are just as well adapted to Residential Buildings as they are to larger structures.



MILCOR
Netmesh Diamond Expanded Metal Lath

THE expanded diamond texture of Milcor Netmesh Lath is produced with special machines and equipment designed and built by our own engineers. The mesh is fine; each Diamond is die-formed, shaped to key the plaster with slight pressure. A comparatively small amount of plaster is required to produce a perfect key on Milcor Netmesh. This feature makes plastering easy, speeds up the work and results in economies.

There is a type of Milcor Netmesh for every requirement.

The rare adaptability of this excellent metal lath for ornamental plastering is outlined on page 20 and its practical value in fire-proofing steel girders and columns is described on page 21.

Furnished as follows:

Cut from Open-Hearth Sheets, Painted Black: After the expanding and reannealing processes the lath is coated with heavy black asphaltum paint — a rust preventative sufficient for most requirements.

Each bundle of Milcor Netmesh Diamond Expanded Metal Lath is labeled with a metal tag as illustrated below, indicating the gauge of metal from which the lath was cut and expanded.

Cut from Coppered Metal, a rust-resisting, copper-bearing metal for projects requiring special protection against rust.

Cut from Tight Coat Galvanized Sheets.

Galvanized After Formed: Cut from black sheets, heat-treated, reannealed and hot-galvanized after expansion; highly efficient in rust-resisting qualities.

Cut from Pure Zinc Sheets, primarily for use with magnesite stucco in which the corrosive action of magnesium chloride makes steel lath impractical; or for use where unusual conditions of moisture are to be guarded against. Galvanized nails or staples must be used with Zinc lath to avoid electrolytic corrosion.

Cut from Pure Cold Rolled Copper Sheets for use under same conditions as

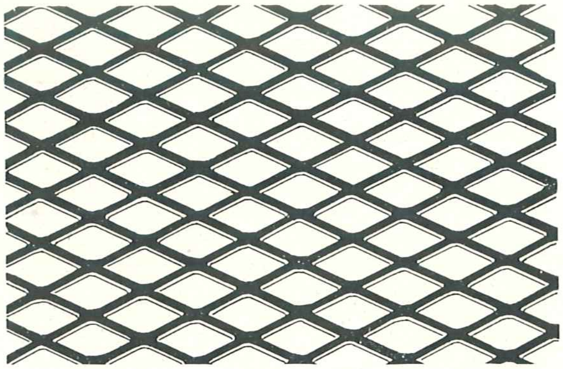
Zinc Sheets. Copper nails or staples must be used with copper lath to avoid electrolytic corrosion.

Zinc or Copper Netmesh is used extensively for construction work at *seaside locations* where the peculiar corrosive action of salt-laden air has heretofore been a baffling element to contend with.

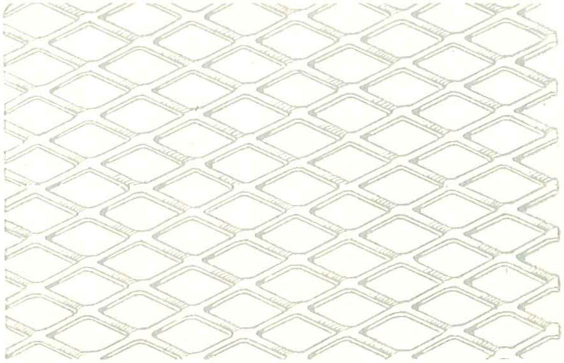
Various adaptations of Milcor Netmesh Lath are illustrated and described on pages 11 and 19 to 23 and Standard Specifications are outlined on pages 54 to 63.

Netmesh Diamond Expanded Lath 3/8″ Mesh

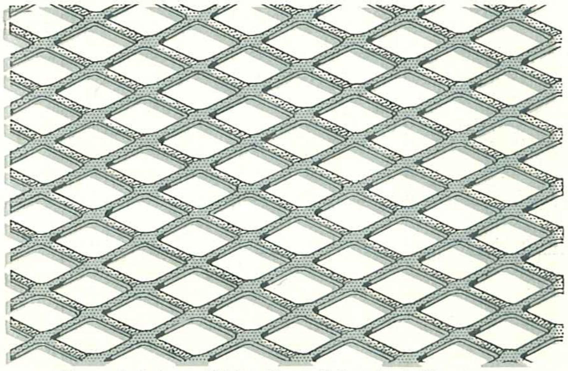
TYPE	Gauge	Size of Sheets Inches	Number of Sheets in Bundle	Square Yards In Bundle	Weight Per Square Yard Pounds	Weight Per Bundle Pounds
Cut from black steel sheets reannealed and painted black after expanded.	27	24 x 96	9	16	2.35	37
	26	24 x 96	9	16	2.50	40
	25	24 x 96	9	16	3.00	48
	24	24 x 96	9	16	3.40	54
	27	30 x 96	9	20	2.35	47
	26	30 x 96	9	20	2.50	50
	25	30 x 96	9	20	3.00	60
	24	30 x 96	9	20	3.40	68
Cut from galvanized open-hearth steel sheets.	27	24 x 96	9	16	2.83	45
	24	24 x 96	9	16	3.47	56
Cut from coppered metal.	27	24 x 96	9	16	2.35	37
	26	24 x 96	9	16	2.50	40
	25	24 x 96	9	16	3.00	48
	24	24 x 96	9	16	3.40	54
Hot galvanized after expanded.	26	24 x 96	9	16	3.00	48
	24	24 x 96	9	16	4.00	64
Cut from pure zinc.	No. 11	24 x 96	9	16	3.03	48
Cut from cold rolled copper.	16 oz.	24 x 96	9	16	3.31	53



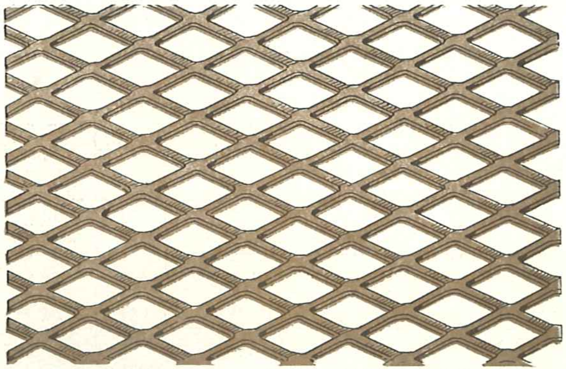
Expanded from Black Open-Hearth Sheets, Heat-Treated and Reannealed, coated with Black Asphaltum Paint.



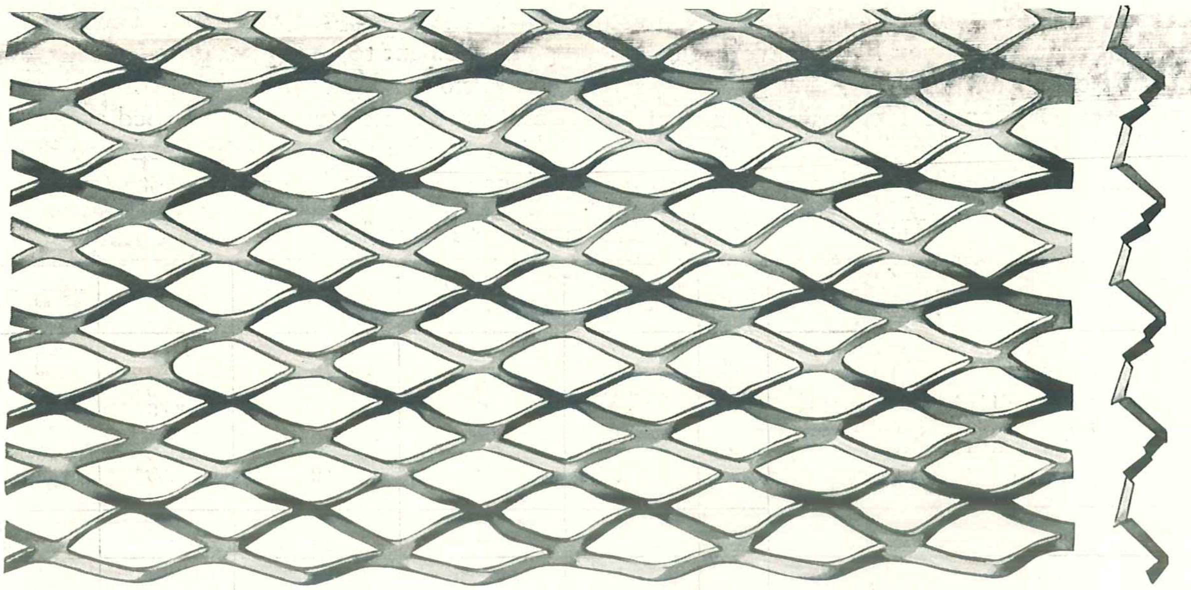
Expanded from Sheets of No. 11 Pure Zinc.



Expanded from Tight Coat Galvanized Sheets.



Expanded from Sheets of 16-oz. Cold Rolled Copper.



MILCOR Corrugated Netmesh

— a Self-Furring Diamond-Mesh Lath

NETMESH *Corrugated* resembles regular Milcor Netmesh Lath, with corrugations added, running the length of the sheet. This lath is applied with corrugations facing the studs and at right angles to them. No furring strips are required — the corrugations allow a body of mortar-filling between the lath and the woodwork.

This lath is used extensively for exterior stucco work, either in backplastering construction or where it is nailed direct to the sheathing.

Milcor Corrugated Self-Furring Netmesh Lath can be furnished in four types:

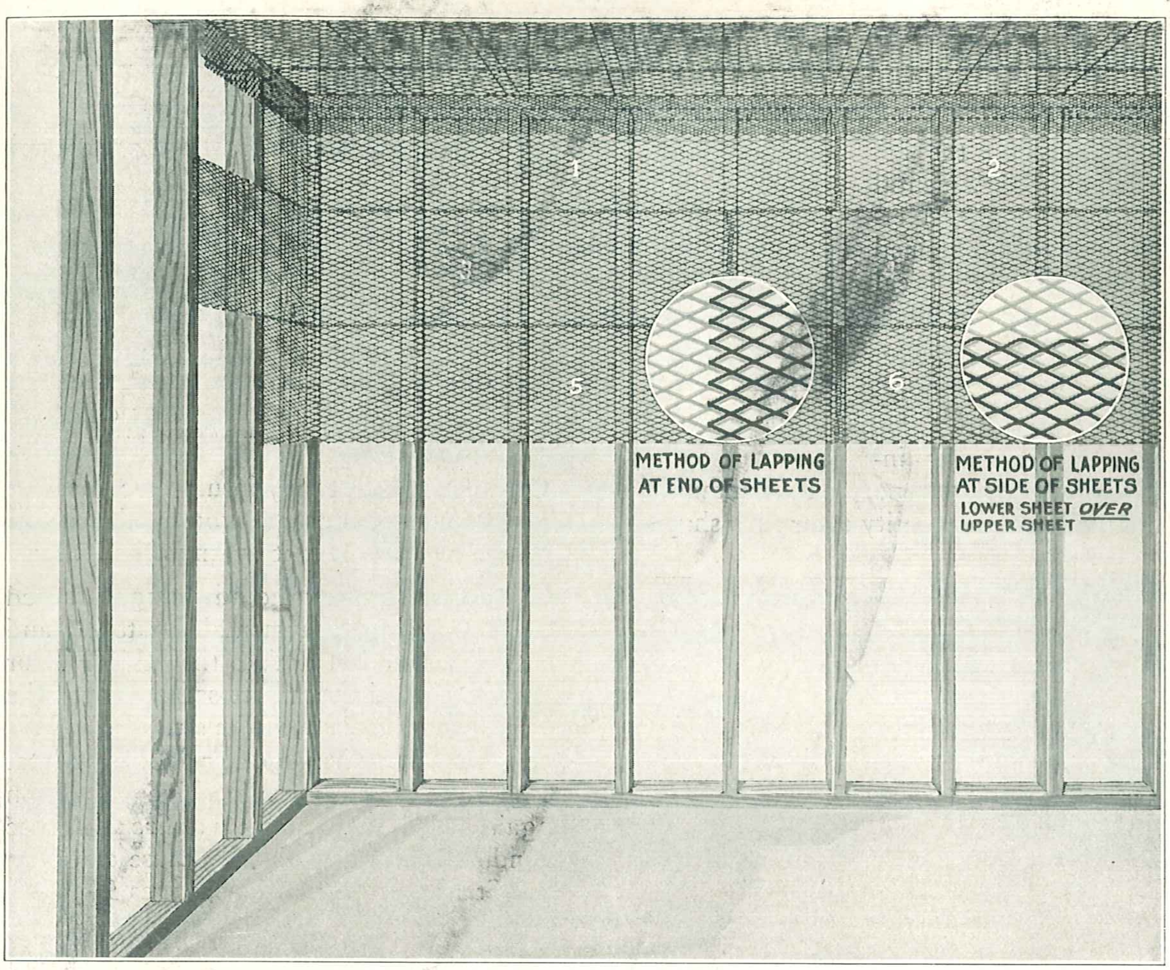
Cut from black, Open-Hearth steel, heat-treated and reannealed, coated with black asphaltum paint.

Cut from Tight Coat Galvanized Open-Hearth Steel.

Cut from Black Open-Hearth Steel, heat-treated and reannealed, hot-galvanized after expansion.

Cut from Coppered Metal.

TYPE	Gauge	Size of Sheets Inches	Number of Sheets in Bundle	Square Yards In Bundle	Weight Per Square Yard Pounds	Weight Per Bundle Pounds
Cut from black steel sheets, reannealed and painted black after expanded.	27	24 x 96	9	16	2.35	37
	26	24 x 96	9	16	2.50	40
	24	24 x 96	9	16	3.40	54
Cut from galvanized open-hearth steel sheets.	27	24 x 96	9	16	2.83	45
	24	24 x 96	9	16	3.47	56
Cut from coppered metal.	27	24 x 96	9	16	2.35	37
	26	24 x 96	9	16	2.50	40
	24	24 x 96	9	16	3.40	54
Hot galvanized after expanded.	26	24 x 96	9	16	3.00	48
	24	24 x 96	9	16	4.00	64


1
2
3
5
6
METHOD OF LAPPING AT END OF SHEETS
METHOD OF LAPPING AT SIDE OF SHEETS
LOWER SHEET OVER UPPER SHEET

MILCOR Lath on Wood Studs

Using 2 x 4-inch Studs, set 16 inches, center to center

As shown above, Sheet Number 1 is first applied, beginning at first stud beyond corner. Slant of strands should be *inward and downward.*

Lath Sheet Number 2 is next, its end lapping over end of Sheet Number 1.

Lath Sheet Number 3 is started at *second stud* so that the sheets will break joints and be continuous around corner.

Sheets Numbers 4, 5 and 6 follow in order shown. Sheet Number 5 laps Number 3, which in turn laps Number 1. The remainder of sheets are placed in same manner until lathing is completed.

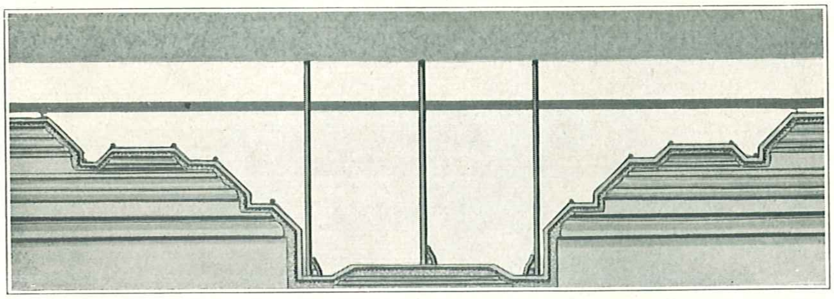
Then ceiling sheets are applied, lapping over on wall as shown, not less than six inches, and are wired to wall lath with No. 18 Galvanized tie-wire.

Fasten lath to studs with 4 d. nails, driving them in firmly until almost home and then clinching them over against juncture of strands. 1¼-inch No. 14 staples may also be used. Lath should be nailed or stapled every six inches on wood.

For precise corners with straight, true lines, Milcor Expansion Corner Bead should always be used.

See details on pages 24, 25 and 55.

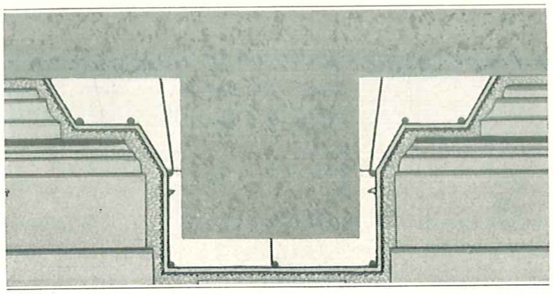
Netmesh for Ornamental Beams



The Milcor Method of erecting support for False Beams and Suspended Ceiling below concrete floor. Hangers are placed before pouring concrete.

GREATLY facilitating the art of ornamental plastering, Milcor Netmesh Lath has gained recognition as the ideal medium for architectural decorative effects.

The perfect pliability of Netmesh permits its formation easily into any desired shape. It maintains its highly desirable rigidity after such shaping.



Ornamental Beam and Cornice over unattractive concrete beam. ¼-inch Rod Hangers placed before pouring concrete. Holes are drilled for Brackets — ¾-inch Milcor Steel Channels — after forms are removed.

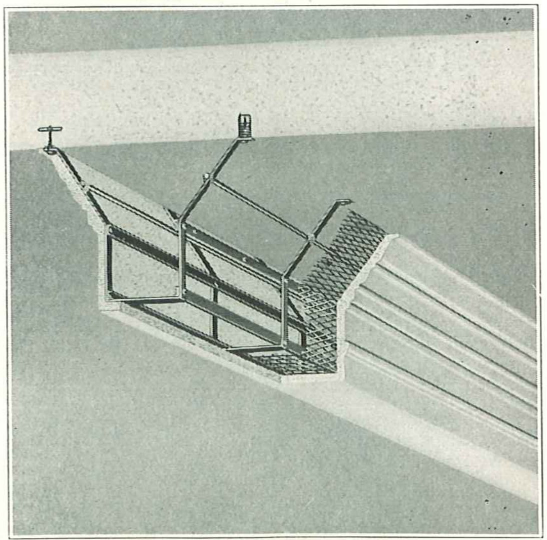
No bending machinery is required to shape Milcor Netmesh, regardless of the directions required for the bends.

The precisely formed Diamond units of Netmesh provide a sure key to grip the plaster at any angle.

Some of the adaptations of Netmesh Lath to Ornamental Beam and Cornice Work are indicated in these illustrations. Standard Specifications applying to such construction are outlined on pages 54 to 63.

On some Ornamental Plastering problems, Milcor Expansion Corner Bead is nicely adapted, for both inner and outer angles of any desired degree. The problem of procuring precisely true lines on beams, pilasters and columns is made simple with these practical products. And Expansion Corner Beads not only insure true lines but add a sturdiness to the work which is impossible of attainment by any other means.

Not the least of the advantages offered by Netmesh in Ornamental Plastering and Stucco work, is the fact that this Milcor construction insures fire-safeness to the underlying members of the structure. Milcor Metal Lath and other Milcor Metal Building Products are positive protection against such costly menaces as fire and those conditions which ordinarily cause cracking. See Standard Specifications, pages 54 to 63.



Perspective of a Milcor False Beam below concrete floor, showing adaptation of ¾-inch Milcor Steel Channels and Milcor Netmesh Lath. Milcor Expansion Corner Bead insures precisely true lines on such work.

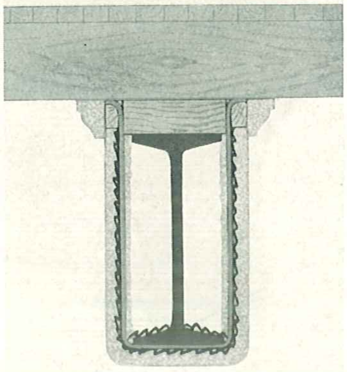
Fire-proofing Girders and Columns

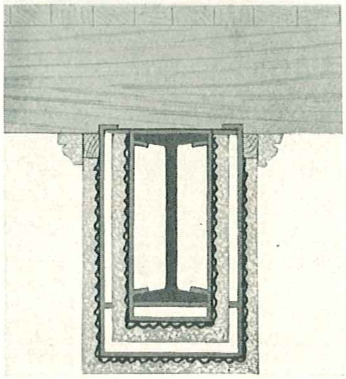
THE life of a building depends on its interior columns and girders. Of what avail is it for them to resist flames if they eventually collapse from the heat of the fire! Steel must be fire-proofed.

The Milcor Method with Milcor Metal Lath offers a practical, economical, safe solution to this problem.

The One-hour Rating of the Underwriters' Laboratories, accorded to metal-lathed lumber construction, and the low temperatures recorded in the hollow spaces of metal-lathed floors and partitions in the Underwriters' tests, serve to emphasize the greater degree of fire-resistance gained by protecting incombustible supports — steel beams, columns and girders — with Milcor Metal Lathed plaster.

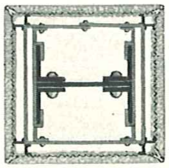
Actual experience in the fierce fires of Baltimore and San Francisco and other conflagrations, as well as tests of the most scientific nature, have developed the facts that old methods of fire-proofing beams and columns were not safe and that the protective material must not only be incombustible and heat-insulating, but must also successfully resist strains of expansion and contraction, impact of falling parts and the erosion of the forceful fire streams.

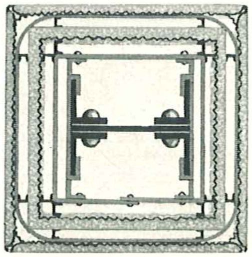

Steel Girder protected by Single-Layer Milcor Netmesh and ¾-in. Plastering.

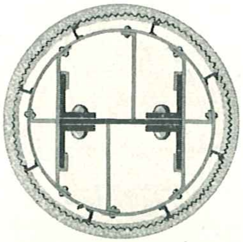

Girder protected by Double-Layer Milcor Netmesh and Double Plastering.

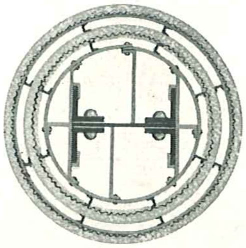
The Milcor Method of metal lath protection provides dead air spaces around the steel work and accomplishes effective protection by surrounding every supporting member with real insulation against *heat* and flames.

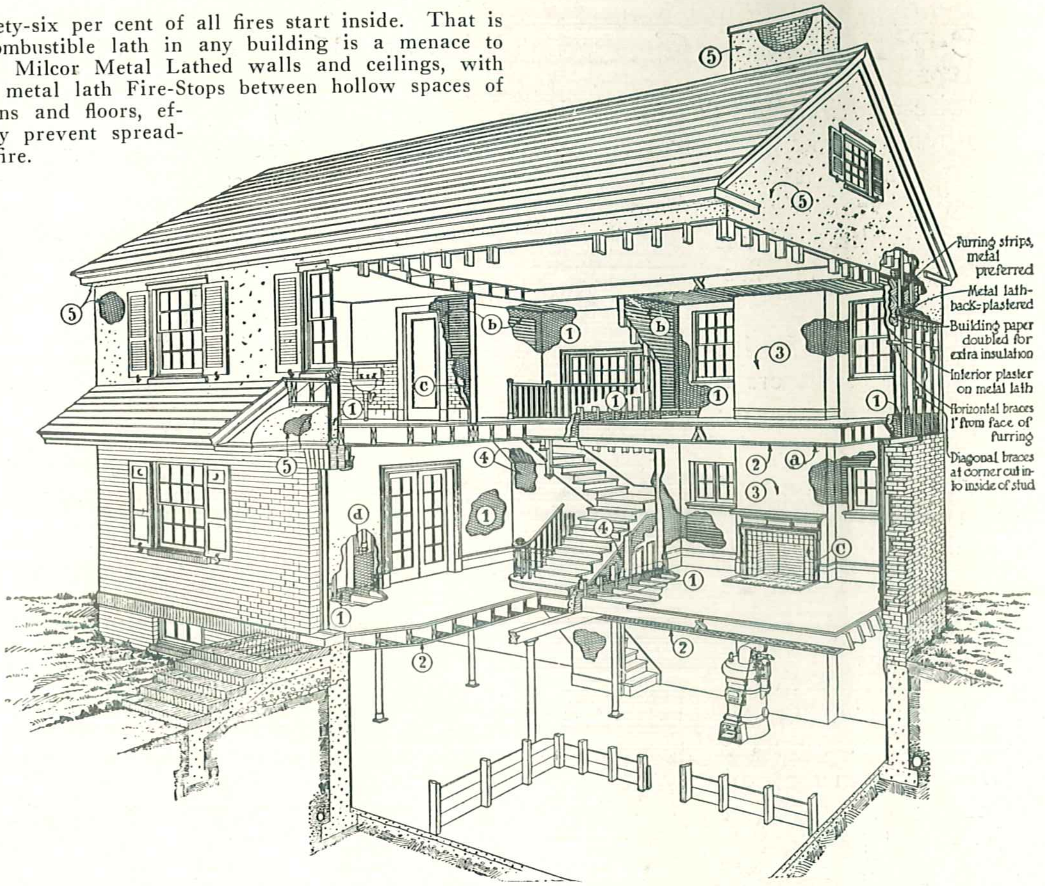
The most important load-bearing members in modern buildings — the columns — need Milcor Metal Lath protection. Single-layer protection shows a minimum fire-resistance of 45 minutes and double-layer protection, 1½ hours, for structural steel columns. Properly furring out from the column so as to provide an air space of one inch between column and lath, and covering with plaster to a thickness of at least ¾ inch, insures fire-resistance for at least two hours on cast iron columns. See Standard Specifications, pages 54 to 63.


Steel Column with single Netmesh-plastered protection. Notice the adaptation of Milcor Expansion Corner Beads with Netmesh.


Double-layer protection with dead-air chambers. Expansion Corner Bead on outer layer only.


Steel Column with single-layer Netmesh-plastered protection in pilaster formation. Notice the adaptation of Milcor Steel Channels.


Double-layer Netmesh-plastered protection in pilaster form. Notice the dead-air chambers provided by use of Milcor Steel Channels.


Furring strips, metal preferred
Metal lath-back-plastered
Building paper doubled for extra insulation
Interior plaster on metal lath
Horizontal braces 1" from face of furring
Diagonal braces at corner cut into inside of stud

Ninety-six per cent of all fires start inside. That is why combustible lath in any building is a menace to safety. Milcor Metal Lathed walls and ceilings, with proper metal lath Fire-Stops between hollow spaces of partitions and floors, effectively prevent spreading of fire.

The Five Most Vulnerable Points

IN homes, there are five points particularly *vulnerable to fires* (note figures in above sketch): 1. All bearing partitions that support floors, should be protected with Milcor Metal Lath Fire-Stops — baskets of Netmesh filled with plaster to block air currents.

2. Ceilings under inhabited floors need Milcor Stay-Rib or Netmesh, especially over heating plants and coal bins.

3. At chimney breasts, around flues and back of kitchen ranges, Milcor Netmesh and Expansion Corner Beads are vital.

4. Closets under stairways should be Milcor-lathed. Fires often start in such places and if any stairway is wrecked, fire may have serious consequences.

5. As a base and reinforcement for exterior stucco, Milcor Metal Lath effectively retards fires.

And these five points, particularly *vulnerable to cracking,* should be Milcor-lathed (note letters in above sketch):

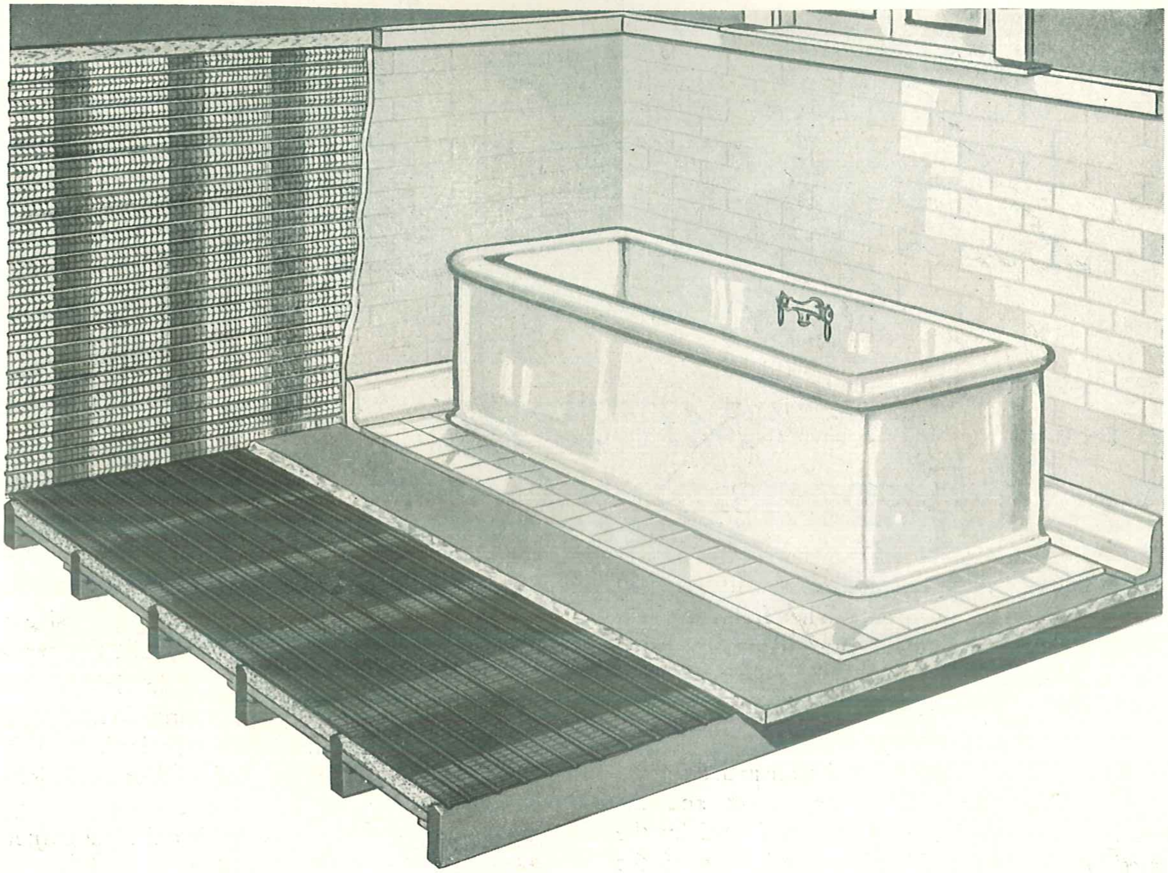
a) Ceilings of halls and prominent rooms need Stay-Rib or Netmesh.

b) Wall and partition angles need Milcor Expansion Corner Beads.

c) Back of Wainscots, Tile Mantels, Bathroom Walls, etc., the need for Stay-Rib or Netmesh is important.

d) For covering plumbing-pipes and heat-ducts, Netmesh is ideally adapted.

e) Back-plastering of exterior stucco walls of Stay-Rib or Netmesh insures freedom from exterior cracks.

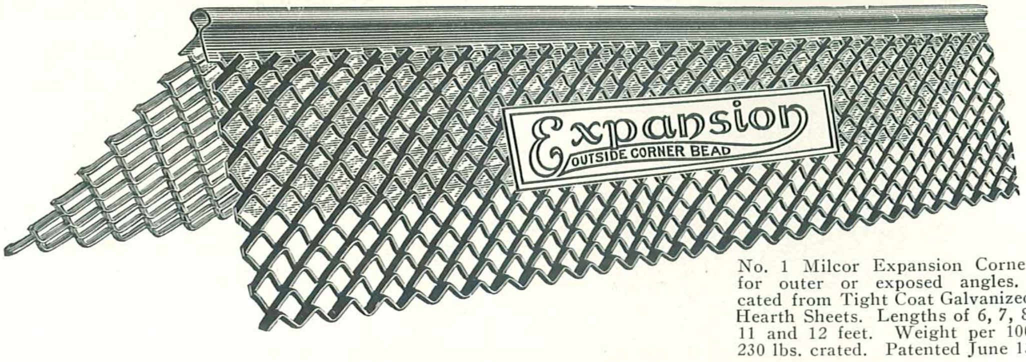


Efficient Under Severe Conditions

CLASSIFICATION of Buildings according to the character of their occupancy, emphasizes the importance of specifying Milcor Metal Lath, Expansion Corner Bead, Steel Domes and other Milcor Fireproof Materials and Methods. All buildings within the following classifications, should use Milcor Products as the most efficient and practical means toward permanence and safety:

Class 1.	Private Dwellings and Duplex Houses.
Class 2.	Apartment Buildings; Multiple Dwellings; Tenement Houses.
Class 3.	Office and Public Buildings; Libraries; Museums; Court Buildings; Police Stations.
Class 4.	Institutions; Hotels; Asylums; Hospitals; Club Houses.
Class 5.	Buildings used for sale and storage of merchandise, with and without contiguous living quarters. Restaurants.
Class 6.	Factory Buildings; Lofts; Stables.
Class 7.	Schools; Colleges.
Class 8.	Theatres; Dance Halls; Public Halls; Lodge Buildings; Churches.
Class 9.	Private, Attached and Public Garages; Dry Cleaning Establishments; Buildings of especially hazardous occupancies.

In bathrooms, laundries, kitchens and other rooms where clouds of steam are frequent or much moisture is prevalent, Milcor Metal Lath and Expansion Corner Bead is essential for safety against cracking or bulging of plaster. As a ground for the concrete and terrazzo or tile floors of bathrooms, Milcor Stay-Rib Metal Lath is highly commendable.



No. 1 Milcor Expansion Corner Bead for outer or exposed angles. Fabricated from Tight Coat Galvanized Open-Hearth Sheets. Lengths of 6, 7, 8, 9, 10, 11 and 12 feet. Weight per 1000 feet, 230 lbs. crated. Patented June 13, 1922.

MILCOR "Expansion" Corner Bead

TRULY a great achievement is the perfection of these unique products invented by Milcor Engineers. The following exclusive features, found only in Milcor Expansion Corner Bead, are particularly appreciated by Architects, Engineers, Building Contractors and Owners:

1. The narrow nose permits an artistic arris.
2. The corner itself is permanent and the walls on each side are ideally reinforced by the mesh of Expanded Metal on each side of the solid nose of the Milcor Expansion Corner Bead.
3. Precisely straight-line corners are certain.
4. Due to savings in labor-cost of erection, the use of these efficient Expansion Corner Beads actually results in economies in construction.

The bead is drawn like a wire in this modern Milcor Expansion Product, assuring a constant accuracy and precise shape. Beginning almost at the base of the bead, the network of Diamond-shaped Expanded Metal Wings permits keying of the mortar right up to the actual corner. This eliminates danger of plaster checking off or cracking, due to blows or other abuse.

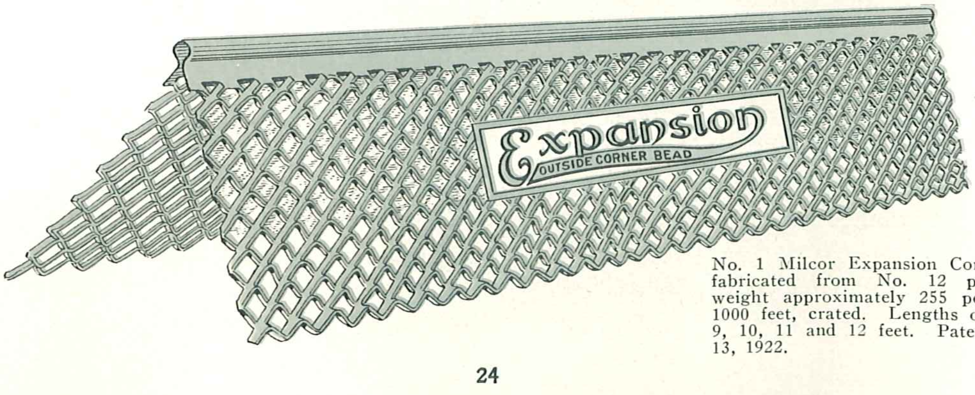
Expansion Wings are Patented and exclusively Milcor. No other corner bead is built this way.

Real economies are possible in labor cost through the simplicity of handling Milcor Expansion Corner Bead. It can be wired, stapled, nailed or stuck to any kind of wall construction, without the use of clips. It permits the saving of much time as compared with old style corner beads erected under old methods.

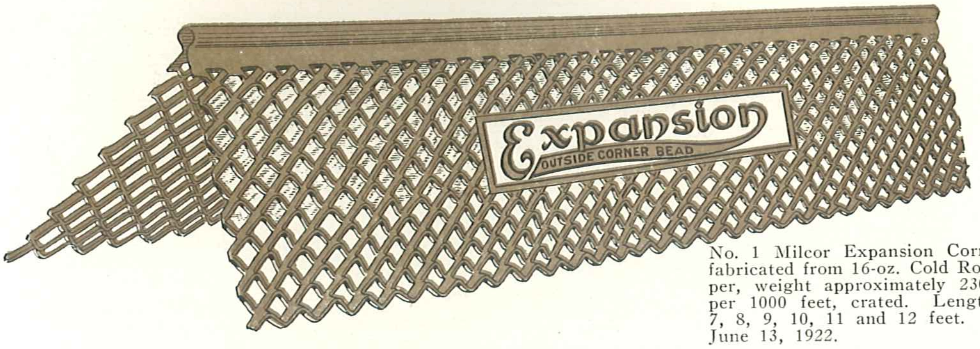
Shocks or blows are immediately dissipated by the Diamond-mesh of expanded metal which also prevents cracking of plaster at particularly vulnerable points — at outer and inner corners.

Contractors are enthusiastic in their approval of Milcor Expansion Corner Bead. McNulty Brothers Company, of Chicago, who plastered the First National Bank Building at Detroit, wrote us that they had —

"erected 80,000 lineal feet of Expansion Corner Bead in this building and are pleased to say that the addi-



No. 1 Milcor Expansion Corner Bead fabricated from No. 12 pure zinc, weight approximately 255 pounds per 1000 feet, crated. Lengths of 6, 7, 8, 9, 10, 11 and 12 feet. Patented June 13, 1922.



No. 1 Milcor Expansion Corner Bead fabricated from 16-oz. Cold Rolled Copper, weight approximately 230 pounds per 1000 feet, crated. Lengths of 6, 7, 8, 9, 10, 11 and 12 feet. Patented June 13, 1922.

tional cost of this bead compared with other types of Beads is fully offset by the cheaper cost of erection."

They have since installed 175,000 feet of Expansion Bead on a single building in Cleveland — The Union Trust Building — and are now erecting this Bead on the Strauss Building and Burnham Building, Chicago.

Meech and Arnold, St. Joseph, Michigan, Plastering Contractors, point out a saving of about 30% through the use of Expansion Bead. Here is what they added to their letter of November 8, 1923, in which they referred to recently completed contracts for a hospital and two schools:

"We believe your 'Expansion' Corner Bead to be the best on the market, barring none. It can be placed on the corner quicker, it holds better and the expanded metal flange prevents the plaster from cracking as is usually the case with other types. We have proven to ourselves that we are money ahead if we pay more for this Bead because we find our labor costs in erecting same are about 70% of our former costs."

Milcor Expansion Corner Bead No. 1 is designed for outer or exposed corners. Expansion Bead No. 2 is designed for inner angles.

To guard against electrolytic corrosion on exterior Magnesite Stucco work, copper nails or staples must be used with Milcor Copper Expansion Corner Bead and Galvanized Nails or Staples must be used with Milcor Zinc Expansion Corner Bead. Permanent contact of copper with zinc or galvanized metal *should be avoided.*

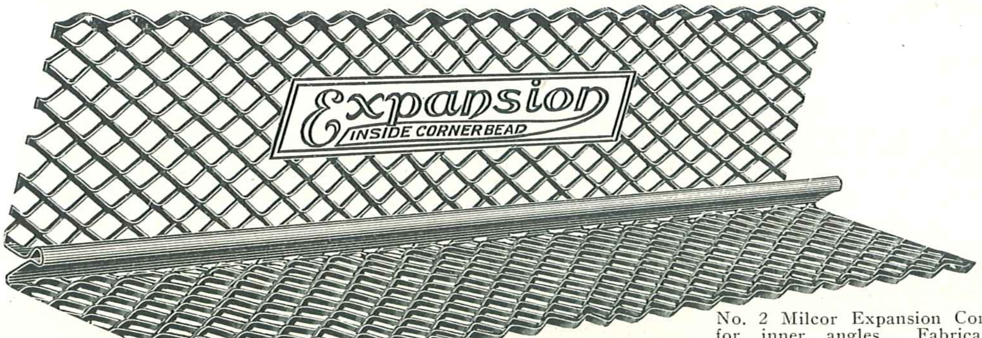
Packed in crates of approximately 500 or 1000 feet.

Methods of Fastening Milcor Expansion Corner Beads

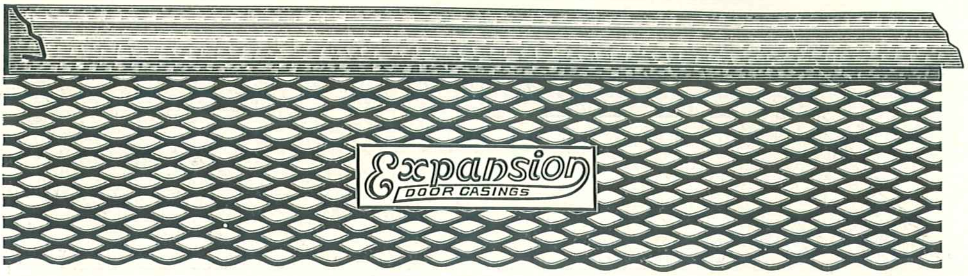
They can be stapled, nailed, wired or stuck in place.

On tile and concrete, much time is ordinarily wasted in locating mortar joints or soft spots for nails to coincide with holes in the old-fashioned beads. There is none of this lost time with Milcor Expansion Corner Bead, with its multitude of openings.

Where Beads are to be "stuck" in place, straight-edges can be provided in sets of eight — two sets to the gang. These straight-edges should be grooved or tenonned so that the nose of the Bead fits in snugly. Clips should be provided to hold the Bead in the groove. This process makes it possible to "stick" eight Milcor Expansion Beads in succession. With the two sets of straight-edges, one set can be prepared while the other is used for the erecting of the Bead. To facilitate precision work, these straight-edges should be provided with a small spirit-level and a plumb bob and line — like a mason's tool.



No. 2 Milcor Expansion Corner Bead for inner angles. Fabricated from Tight Coat Galvanized Open-Hearth Sheets. Lengths of 6, 7, 8, 9, 10, 11 and 12 feet. Weight per 1000 feet, 230 lbs., crated. Patented June 13, 1922.



No. 6, O. G. Expansion Casing, fabricated from Tight Coat Galvanized Open-Hearth Sheets. Lengths of 6, 7½, 8, 9, 10 and 12 feet. Weight per 500 feet crated, 175 lbs. Patented June 13, 1922.

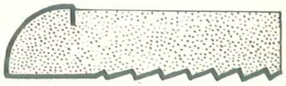
MILCOR Expansion Casings

ARTISTIC, sanitary, fire-safe and economical, Milcor metal casings certainly have important advantages over old-fashioned wooden casings.

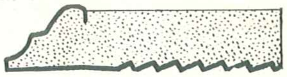
Before the invention of Milcor "Expansion" Casings there were serious drawbacks to the use of the old-type solid metal casings.

Extending in under the plaster, the flat solid surface of the ordinary metal casing provided no grip-hold for the plaster. Consequently, as the plaster dried out, it slipped away from the metal and cleavage-cracks were almost certain to show up along those lines where wall and casing met.

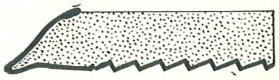
Milcor Expansion Casings, however, with their *Expanded* metal wings, provide the means for a close and permanent bond which eliminates any possibility of cleavage-cracks developing at the juncture of wall and casing.



No. 4 — ¼ Round



No. 6 — O. G.

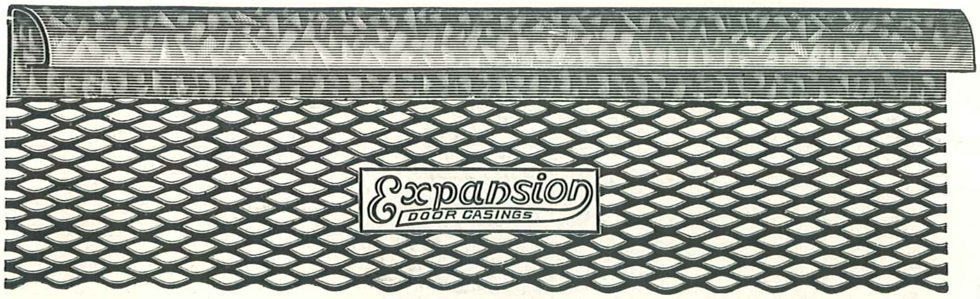


No. 8 — O. G. — 24 Gauge

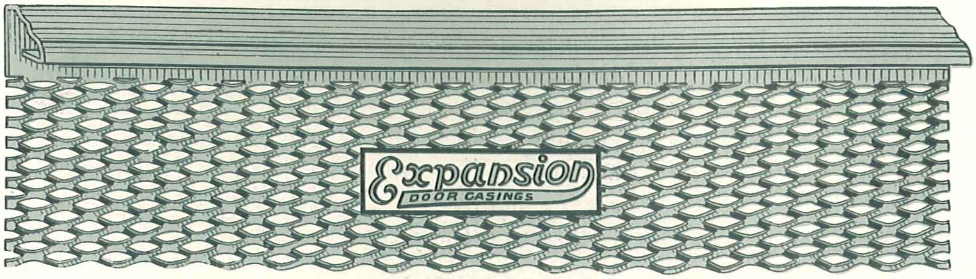
The practical features of Milcor Expansion Casings are many. The architectural effects possible with this modern building product are accepted as artistically correct, the last word in style and "good taste." The initial cost is surprisingly low compared with hardwood casings and the labor cost for installation is greatly reduced.

The remarkable plaster-gripping qualities of the wings of Milcor Expansion Casings, greatly strengthen and reinforce the wall.

The flush, tight juncture of the wall and casing forms a sanitary feature of much importance — a feature found exclusively in Milcor Expansion Casings. And, of



No. 4, ¼-Round Expansion Casing, fabricated from Tight-Coat Galvanized Open-Hearth Sheets. Lengths of 6, 7½, 8, 9, 10 and 12 feet. Weight per 500 feet crated, 175 lbs. Patented June 13, 1922.



No. 6, O. G. Expansion Casing, fabricated from No. 12 Pure Zinc. Lengths of 6, 7½, 8, 9, 10 and 12 feet. Weight per 500 feet, 185 lbs. Patented June 13, 1922.

course, the fire-safeness of these Casings is another of the highly practical advantages.

Three styles of Molding are available. Each style is conservative and simple in its design and gives a rare touch of reserved, inconspicuous beauty to the rooms where it is used as door and window-trim. The three styles are:

No. 4, ¼ Round; No. 6 O. G., and No. 8 O. G. Notice the profile drawings, page 26, indicating the shape of each.

No. 8, O. G., is fabricated only from 24 Gauge Tight Coat Galvanized Open-Hearth Sheets. Lengths of 6, 7½, 8, 9, 10 and 12 feet. Weight per 500 feet, 200 lbs., crated.

Milcor Expansion Door and Window Casings are furnished in three types:

Cut from Tight Coat Galvanized, Open-Hearth Sheets.

Cut from Pure Zinc, No. 12.

Cut from Cold Rolled Copper, 16 oz.

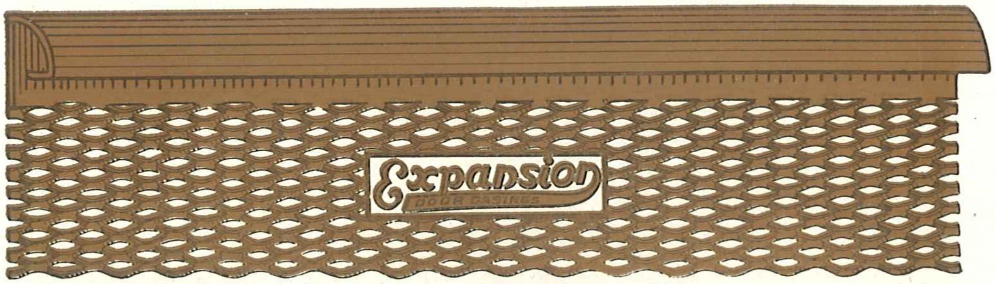
There is nothing that can take the place of the Milcor Expansion Line in the attainment of choice artistic effects, beautiful simplicity of finish, practical durability and perfect utility. Distinctively new, their conception marks a real advance in an era demanding permanence and fire-safeness in building methods and materials.

Patented Casing Lock, or Clip

See Illustration on Next Page

THE Milcor Casing Clip was designed to lock Milcor Casings firmly upon the jamb, to prevent any possibility of the casings opening away to the slightest degree from the door or window jamb.

Expansion Casings are punched with 7/16-inch round holes, 3 inches center to center. Clips are customarily used, however, no closer than 6 inches center to center. Round-head screws, ¾-inch No. 10

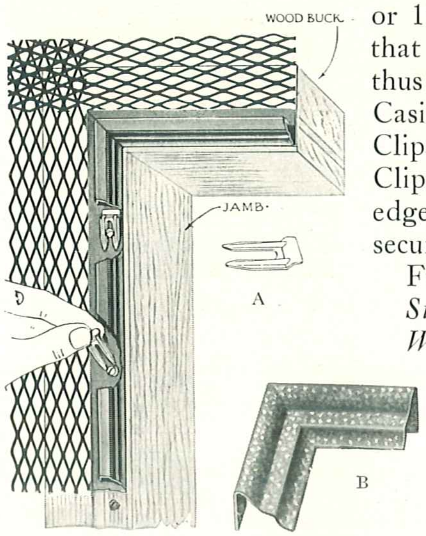


No. 4, ¼-Round Expansion Casing, fabricated from Pure 16-oz. Cold Rolled Copper. Lengths of 6, 7½, 8, 9, 10 and 12 feet. Weight per 500 feet, 175 lbs., crated. Patented June 13, 1922.

or 12, are driven into the permanent jamb just far enough so that the heads project about 1/8 inch. After all the screws are thus lined up, the casing is slipped over the screw heads. The Casing is properly aligned and nailed to the buck; then the Clips are slipped between the screw head and the Casing. The Clips are then driven home with a nail-set and hammer, chisel-edge or any handy tool, thus locking the edge of the casing securely down on the jamb.

Furnished as follows:

Stamped from Tight Coat Galvanized, Open-Hearth Sheets. Weight per thousand, 15 pounds.

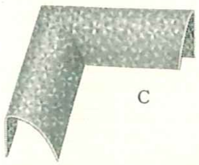


One-Piece Mitres

These Milcor One-Piece Mitres aid the workmen to make true mitre-joints and serve to strongly reinforce the joints. They slip *inside* the casings and are entirely hidden from sight. Even though casings might tend to pull away because of settlement or shrinkage of the wood, Milcor Mitres would still hold joints in presentable condition. Made for No. 4 and No. 6 Expansion Casings only.

Stamped from Tight Coat Galvanized Open-Hearth Steel in one piece. Weight 80 lbs. per thousand.

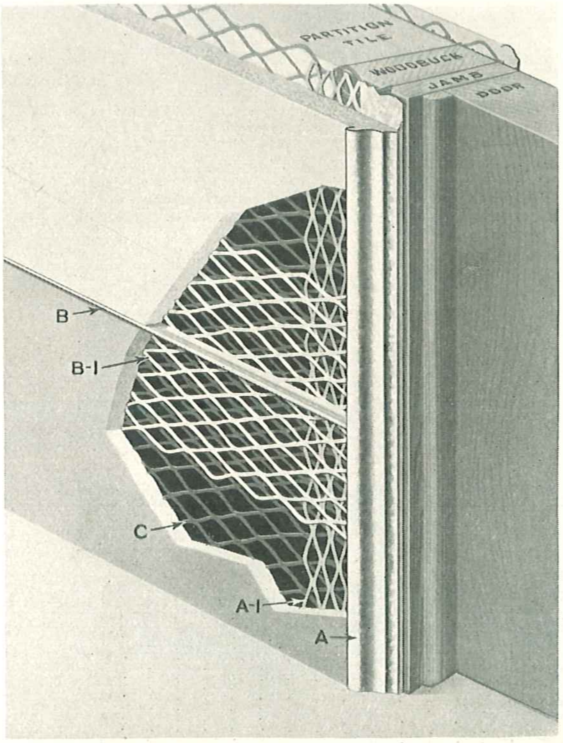
B


C

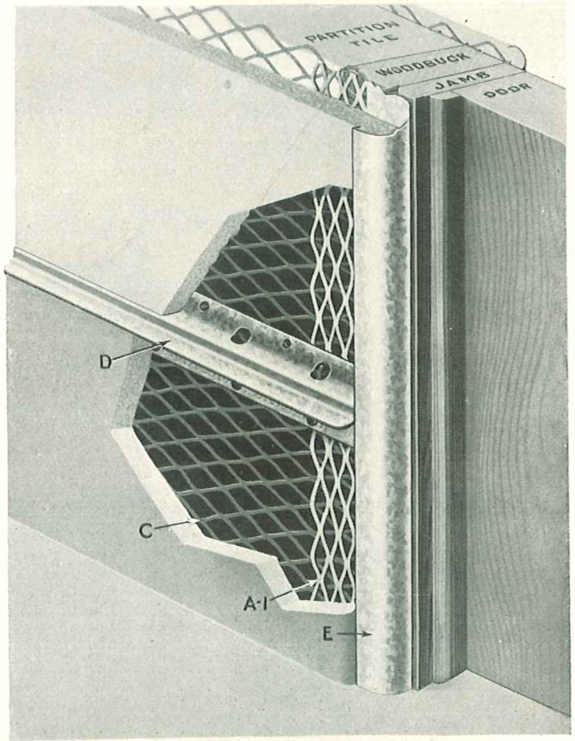
A — Showing Under Side of Clip.

B — No. 6, O. G. One-Piece Mitre.

C — No. 4, 1/4-Round One-Piece Mitre.



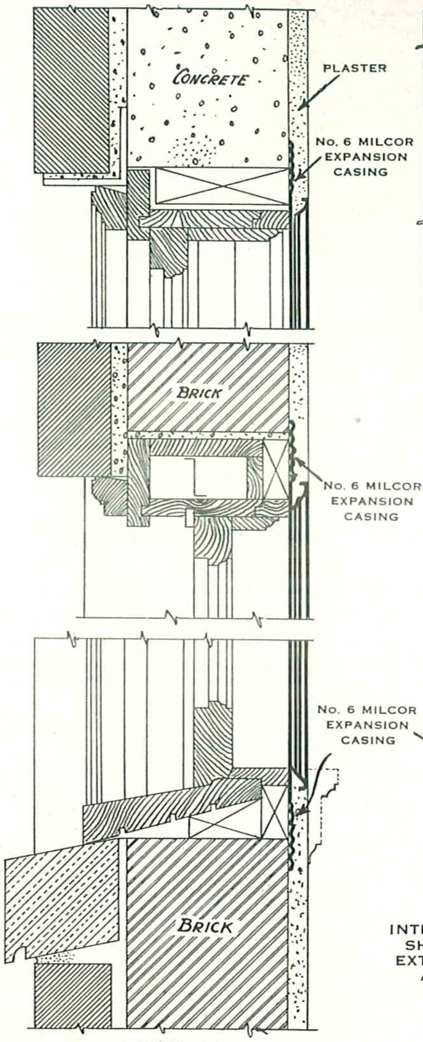
Details of No. 6, O. G. Expansion Door Casing, with No. 3 Expansion Flush Plastering Screed and Netmesh Lath.



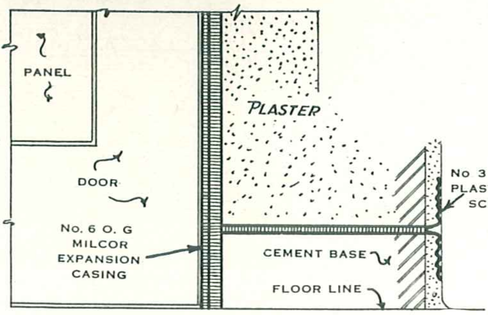
Details of No. 4, 1/4-Round Expansion Casing with Milcor Curved Point Base Screed and Netmesh Lath.

Note the network of expanded metal through which the plaster keys and unites Casing with Base Screed and Metal Lath.

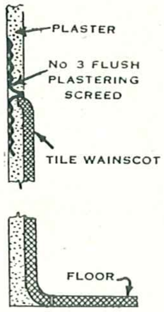
Typical Details Using Expansion Products



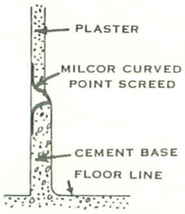
DETAIL OF MILCOR METAL CASING USED ON MASONRY WALLS


PANEL
DOOR
No. 6 O. G MILCOR EXPANSION CASING
PLASTER
No 3 FLUSH PLASTERING SCREED
CEMENT BASE
FLOOR LINE

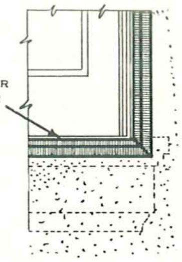
ELEVATION AND SECTION SHOWING EXPANSION No. 3 FLUSH PLASTERING SCREED BUTTING INTO No 6 O. G. EXPANSION CASING



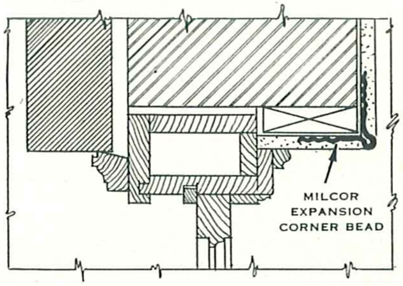
SECTION SHOWING No. 3 MILCOR SCREED SEPARATING TILE WAINSCOT FROM PLASTER



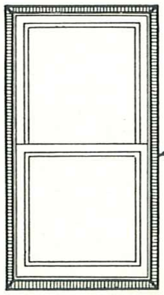
SECTION SHOWING MILCOR CURVED POINT SCREED USED WHERE FACE OF BASE PROJECTS BEYOND FACE OF PLASTER



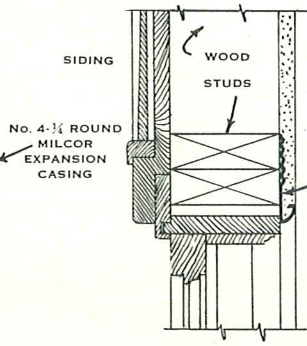
INTERIOR PART ELEVATION SHOWING No. 6 MILCOR EXTENSION CASING USED AS SANITARY STOOL



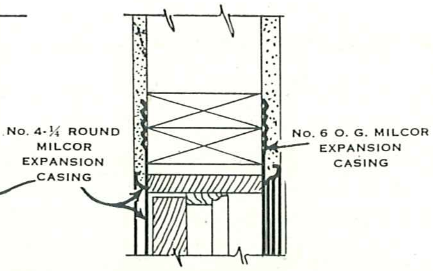
DETAIL OF JAMB SHOWING APPLICATION OF MILCOR EXPANSION CORNER BEAD TO PLASTER RETURN OF DOOR AND WINDOW



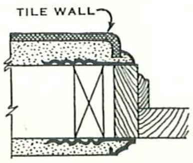
INTERIOR ELEVATION OF WINDOW SHOWING No. 4 MILCOR EXPANSION CASING



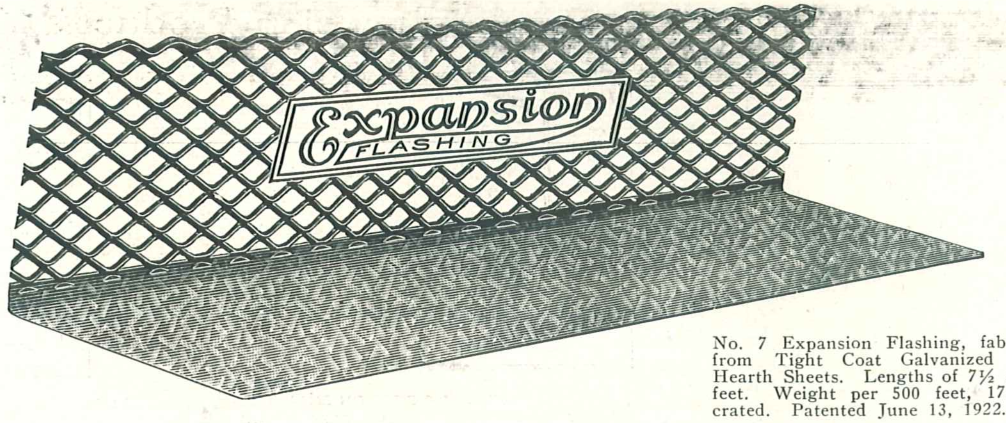
DETAIL OF MILCOR No. 4-¼ ROUND EXPANSION CASING USED IN FRAME WALL


No. 4-¼ ROUND MILCOR EXPANSION CASING
No. 6 O. G. MILCOR EXPANSION CASING

INTERIOR DOOR-HEAD SHOWING APPLICATION OF MILCOR METAL CASINGS



SECTION THRU JAMB SHOWING MILCOR METAL CASINGS



No. 7 Expansion Flashing, fabricated from Tight Coat Galvanized Open-Hearth Sheets. Lengths of 7½ and 12 feet. Weight per 500 feet, 175 lbs., crated. Patented June 13, 1922.

MILCOR
Expansion Flashing

THE combination of a *solid* metal wing with an *expanded* metal wing in the Milcor Expansion Flashing fulfills an ideal, the attainment of which has been heretofore impossible.

In this new expanded metal Flashing, Milcor Engineers have accomplished the means to eliminate the menace of water seepage and the attendant danger of cracking of the exterior stucco around doors, windows or other openings.

Water cannot leak in between casings and the stucco if Milcor Expansion Flashings have been used. The *solid metal wing* on one side prevents this, while on the other side the *expanded metal wing*, with web-like bond, unites the plaster or stucco permanently to the framework.

This modern Milcor Flashing provides the desired rigidity of support so necessary to prevent stucco or plaster from cracking or breaking.

There are three types of Milcor No. 7 Expansion Flashings:

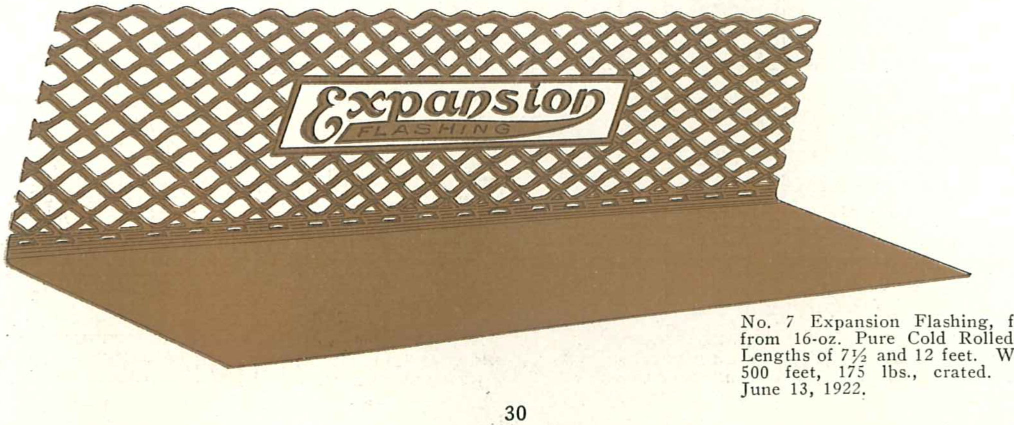
Cut from galvanized open-hearth sheets.

Cut from Pure Zinc, No. 12.

Cut from 16-oz. Cold Rolled Copper.

Crated approximately 500 feet to crate.

Note: Copper and Zinc, when used with Magnesite Stuccoes, must not permanently touch each other or galvanized steel or other metal. Copper Flashing must therefore be applied with copper nails or staples and Zinc Flashing with galvanized nails or staples.

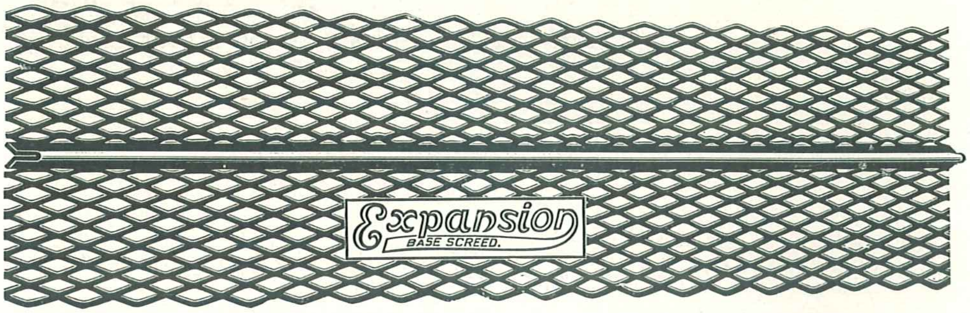


No. 7 Expansion Flashing, fabricated from 16-oz. Pure Cold Rolled Copper. Lengths of 7½ and 12 feet. Weight per 500 feet, 175 lbs., crated. Patented June 13, 1922.

HOTEL ROOSEVELT, NEW YORK
GEO. B. POST & SONS, ARCHITECTS, NEW YORK
WILLIAMSON & ADAMS, BEAD ERECTORS, NEW YORK

BILTMORE HOTEL, ATLANTA, GA.
SCHULTZE & WEAVER, ARCHITECTS, NEW YORK
ZANDER-REUM CO., PLASTERING CONTRACTORS, CHICAGO

Milcor Expansion Products used in these famous Hotels.



No. 3 Expansion Flush Base Plastering Screed, fabricated from Tight Coat Galvanized Open-Hearth Sheets. Lengths of 10 and 12 feet. Crated 1000 and 1008 feet respectively. Weight per 1000 feet, 230 lbs., crated. Patented June 13, 1922.

MILCOR
"Expansion" Flush Base Screed

MILCOR Expansion Flush Plastering Screed No. 3 is designed for use wherever Portland Cement and Lime or Gypsum Plasters are to be joined. Where cement base is wanted flush with plastered wall or where cement wainscoting is to be divided from plastered wall, it is ideal, the expanded metal wings of this screed binding and reinforcing both cement and plaster, tying them together firmly. This eliminates separation cracks heretofore unavoidable under such conditions.

Milcor Expansion Screed forms an ideal, flush, precisely straight-line joint between plastered wall and cement based wainscot. Its expanded metal wings reinforce the covering materials and *eliminate* any possibility of cracks developing at their juncture.

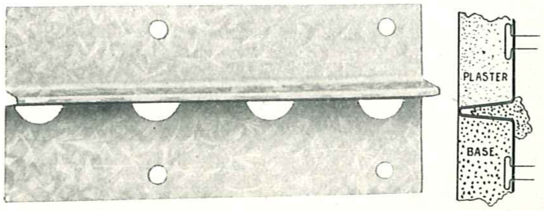
Consult the group illustration on page 2, showing Expansion Base Screed in position in a wall and the illustration in lower left corner of page 28.

This Screed is perfectly adapted to use with Expansion Casings where Casing runs straight through to floor, with cement base flush with plaster.

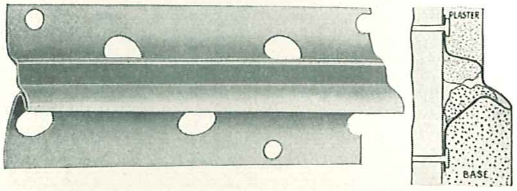
Other Milcor Base Screeds

In the complete Milcor Line, other types of metal corner beads, without expanded wings, are also available. The designs in these Corner Beads, Screed and Molding, as developed by Milcor Engineers, are more practical than most solid metal winged products of this class.

Details on pages following.



Milcor Plain Base Screed, with sketch showing profile after plastering. Fabricated from Tight Coat Galvanized Open-Hearth Sheets. Lengths of 10 and 12 feet. Crated 1000 and 1008 feet respectively. Weight, 140 lbs., crated, per 1000 feet.



Milcor Curved Point Base Screed, with sketch showing profile after plastering. Fabricated from Tight Coat Galvanized Open-Hearth Sheets. Lengths of 10 and 12 feet. Crated 1000 and 1008 feet respectively. Weight 225 lbs., crated, per 1000 feet.

MILCOR Old-Style Metal Base Screed and Corner Beads

Milcor Curved Point Base Screed

THIS inconspicuous, indestructible, true-lined, Curved Point Milcor Base Screed forms a permanent grounds for plastering. It displaces the usual temporary wood grounds and forms a permanent cap for Portland Cement base.

With this Milcor Curved Point Base Screed it is possible to secure a sanitary base with precisely true lines — a result impossible to secure with Portland Cement alone because it will not cut smoothly under a mold unless weakened with lime putty to an impractical state. This convenient Milcor Metal Base Screed helps eliminate any possibility of cracking between concrete base and plastered wall.

Milcor Plain Base Screed

DESIGNED for use where a flush base is desired. Both Milcor Curved Point and Plain Base Screeds are cut from Tight-Coat Galvanized Open-Hearth Steel; in 10-foot or 12-foot lengths, packed 1000 and 1008 feet to the crate, respectively.

Milcor Curved Point Screed weighs approximately 225 lbs. per 1000 feet; Milcor Plain Screed weighs approximately 140 lbs. per 1000 feet.

See illustrations on preceding page of both Curved Point and Plain Base Screeds.

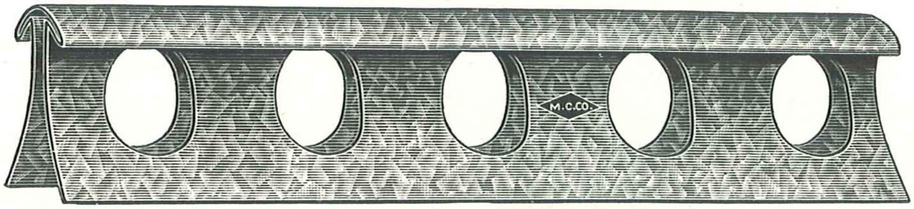
Milcor "Bull Nose" Corner Bead

DESIGNED by Milcor Engineers for use in Hospitals and similar institutions, the broad, sturdy, rounded corner of Milcor "Bull Nose" has made this Corner Bead very popular.

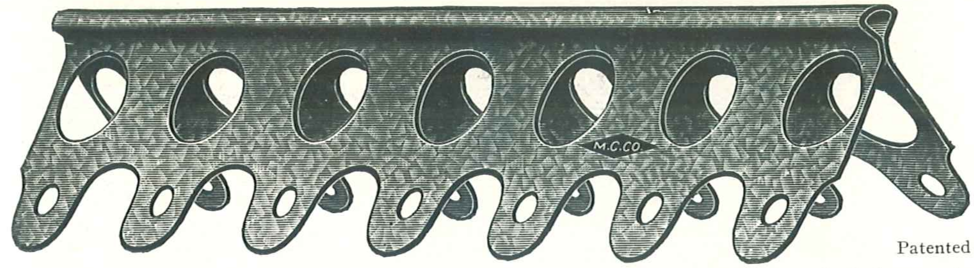
The "Bull Nose" construction provides excellent protection for the corner and acts as a dependable buffer against moving trucks or other heavy objects which would be apt to damage any less substantial Bead.

The Bull Nose harmonizes well with concave or rounded corners at floor and ceiling lines and around windows in such buildings as Hospitals, where sharp angles are not as desirable, from a sanitary standpoint, as rounded angles.

Furnished in lengths of 5, 6, 7, 8, 9, 10 and 12 feet, cut from Tight-Coat Galvanized Open-Hearth Steel. Shipping weight approximately 290 lbs. per 1000 feet, crated; approximately 1000 feet to the crate.



Bull Nose Corner Bead, showing broad, curved nose.



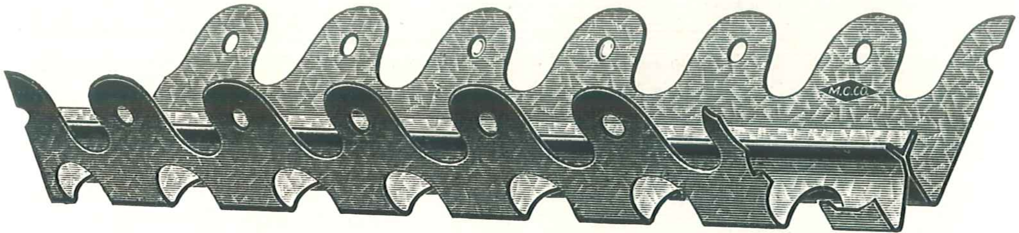
Patented

Superior Corner Bead, for Outer Corners. Furnished in lengths of 6, 7, 8, 9, 10 and 12 feet; made from Tight-Coat Galvanized Open-Hearth Steel. Packed ten pieces of uniform length to the bundle; crated approximately 500 and 1000 feet. Shipping weight approximately 185 lbs. per 1000 feet, crated.

Milcor "Superior" Corner Bead

MADE for outer or exposed corners, the small rounded nose of Superior *Outside* Corner Bead makes an artistic, well-protected corner and furnishes a good grounds for the plasterer to work to. Its extra-wide flanges, or webs, provide an exceptional nailing surface. Its key holes for mortar are staggered, thus gaining maximum strength at nose of bead.

Superior *Inside* Corner Bead forms a precise angle for the Plasterer to work to and accomplishes real protection against development of unsightly radial cracks at inner angles of plastered walls.

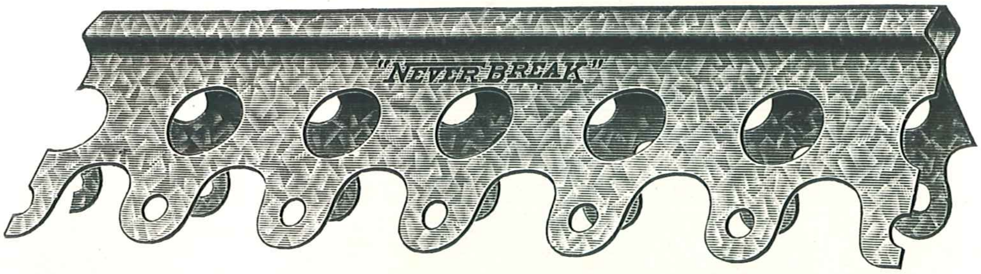


Superior Corner Bead for Inner Corners.

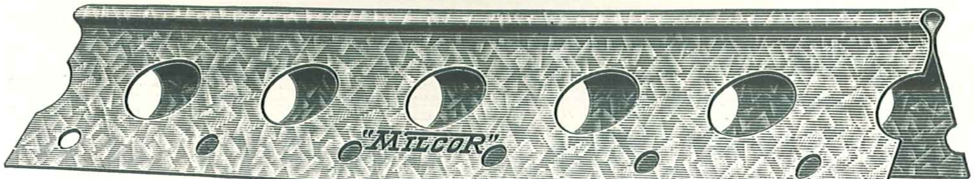
Patented

Milcor "Neverbreak" Corner Bead

THE "Neverbreak" Outer Corner Bead is similar in general design to the "Superior." But the *nose* is different. The "Neverbreak" has a pronounced diamond-shaped nose, forming a triangular corner, instead of the oval corner of the "Superior." The "Neverbreak's" stiff and straight diamond-shaped nose is exposed for ¼ inch and affords good protection for the corner. It also has staggered key holes.



Neverbreak Corner Bead. Furnished in lengths of 6, 7, 8, 9, 10 and 12 feet; made of Tight-Coat Galvanized Open-Hearth Steel. Shipping weight approximately 185 lbs. per 1000 feet, crated. Packed approximately 500 and 1000 feet to a crate.



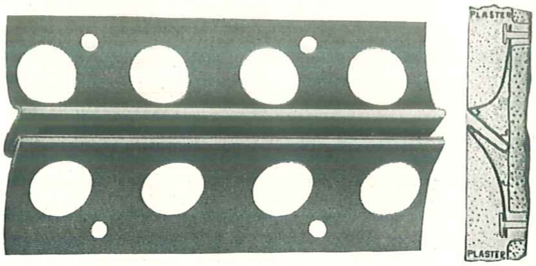
The Milcor Corner Bead. Furnished in lengths of 6, 7, 8, 9, 10 and 12 feet; made from Tight-Coat Galvanized Open-Hearth Steel. Weight approximately 200 lbs. per 1000 feet, crated. Packed approximately 500 and 1000 feet to a crate.

The "Milcor" Corner Bead

THE "Milcor" Bead, for outer or exposed corners, has same type oval-shaped nose as "Superior" Bead, but instead of scalloped wings of the "Superior," the "Milcor" Bead wings have straight edges. Key holes are staggered.

Milcor Concealed Picture Molding

Fabricated from Tight-Coat Galvanized Open-Hearth Steel. Furnished in lengths of 10 or 12 feet.



Packed 1000 or 1008 feet to the crate, respectively; weight approximately 255 lbs. per 1000 feet, crated.

AN intangible something subtly impresses you when you enter a Milcor-trimmed room. Perhaps this impression reaches you through a sense of artistic propriety — perhaps it comes to you through a feeling that the room is exceptionally neat and well taken care of. But whatever channel it pursues, the impression is one of satisfaction — you *like* these rooms.

So inconspicuous! So neat! Milcor metallic construction imparts rare distinctiveness to the modern building or home. So much of a well-tailored appearance — just *naturally* such rooms are universally pleasing. Walls are unbroken by dusty, unsanitary, old-fashioned woodwork that makes rooms seem smaller than they really are.

Even in such details as Picture Molding, the Milcor touch means much to architects in developing a thoroughly pleased clientele. It is scarcely necessary to make an actual comparison to recognize the inferiority of old-fashioned wooden molding and to appreciate the supreme value of Milcor Metallic Picture Molding — the concealed, invisible kind!

Wooden Molding is an eyesore and a dust and vermin-collecting menace to sanitation.

Milcor Concealed Picture Molding — permanent, sturdy and sanitary — inconspicuously floats the pictures and decorations and anchors them without marring or breaking the beautiful expanse of wall. Milcor Concealed Picture Molding is built in — imbedded in the base of the plastered wall. It forms a rigid, dependable support for even the heaviest decorations. It can never warp or sag or show ill-matched ends, as old-fashioned molding generally does.

The "Milcor" Universal Corner Bead Clip

THE Milcor Universal Clip is adapted to use with all Milcor Old Style Corner Beads wherever Clips are necessary. This Clip is very simple and is easily adjusted. It holds the Bead rigidly.

Stamped from Tight-Coat Galvanized Open-Hearth Steel; packed in cartons of 2000; weight per thousand, 25 pounds.

Milcor Galvanized Brick Bond or Wall Tie

THE corrugations on Milcor Brick Bonds or Wall Ties add strength and increase the grip-hold of mortar. A secure tie-up is assured.

These Brick Bonds are suitable for solid brick walls or for brick-veneered work. The Bonds are furnished with two nail holes punched at each end.

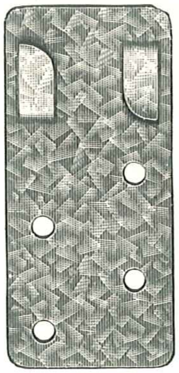
Size: ⅞ inch x 6¾ inches, corrugated the short way; stamped from Tight-Coat Galvanized Open-Hearth Steel; packed 1000 in a carton, weight per carton 35 pounds.

Milcor Crimped Metal Furring

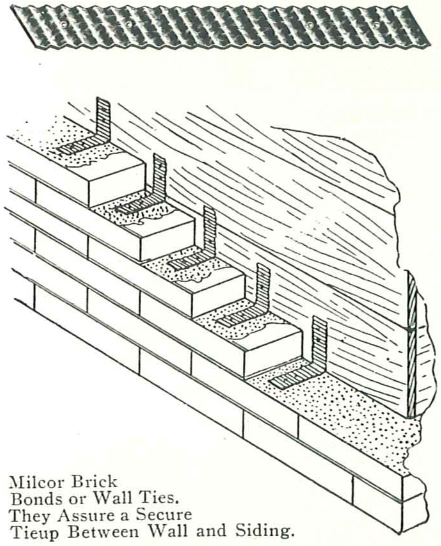
WHERE Metal Furring is required, this simple Milcor Crimped Metal Furring is nicely adapted to any form of construction.

It is made from No. 22 Band Iron and is furnished in these practical sizes:

½ inch — approximately 20 lineal feet to the pound; ¾ inch — approximately 15 lineal feet to the pound; 1 inch — approximately 10 lineal feet to the pound. Furnished in rolls.

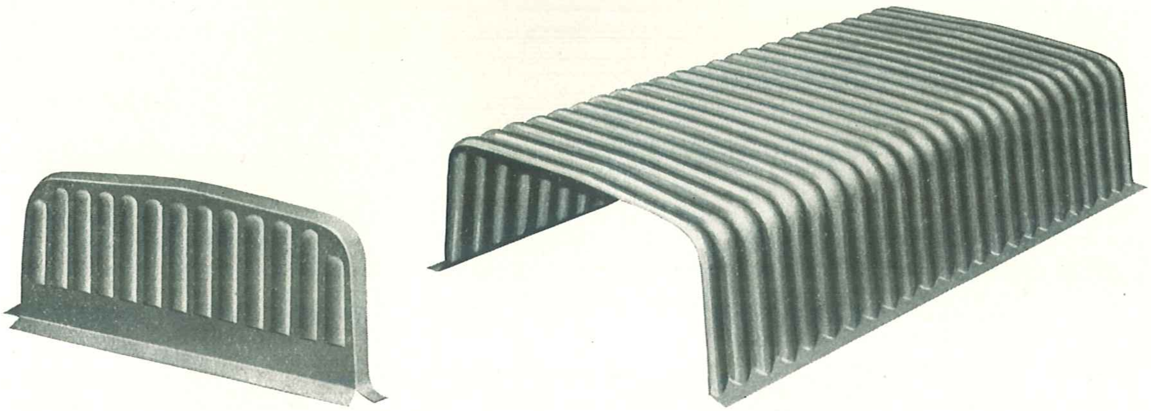


Milcor "Universal" Corner Bead Clip, Fits All Types of Milcor Old Style Beads.



Milcor Brick Bonds or Wall Ties. They Assure a Secure Tieup Between Wall and Siding.

Milcor Crimped Metal Furring



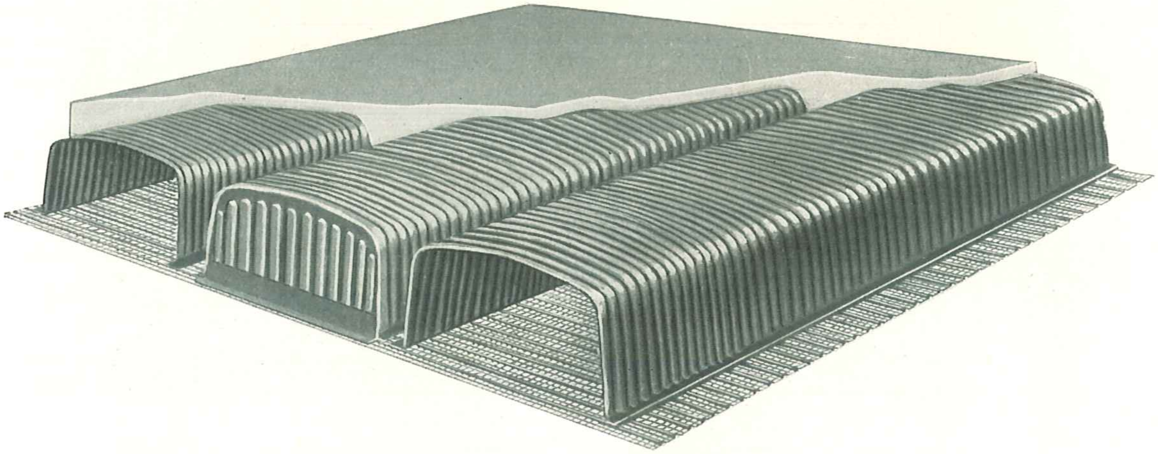
MILCOR
Corrugated Steel Domes

REINFORCED concrete floors formed by MILCOR STEEL DOMES are the ultimate expression of economy and strength in this universally-employed type of construction. They are the result of a comprehensive study of the theories and principles governing reinforced concrete design. They are the outcome of a consummate endeavor to combine most economically the practical with the theoretical.

MILCOR STEEL DOME FLOORS have unsurpassable advantages when used in connection with either a structural steel frame, a reinforced concrete frame, or a wall-bearing structure, in the construction of buildings required to sustain light loadings. This class includes structures such as hotels, office buildings, apartment buildings, hospitals, churches, schools, and the like. Even in the erection of structures of a heavier character or of a unique type which require extreme delicacy in their design, MILCOR STEEL DOMES will at times provide a solution which cannot be equalled.

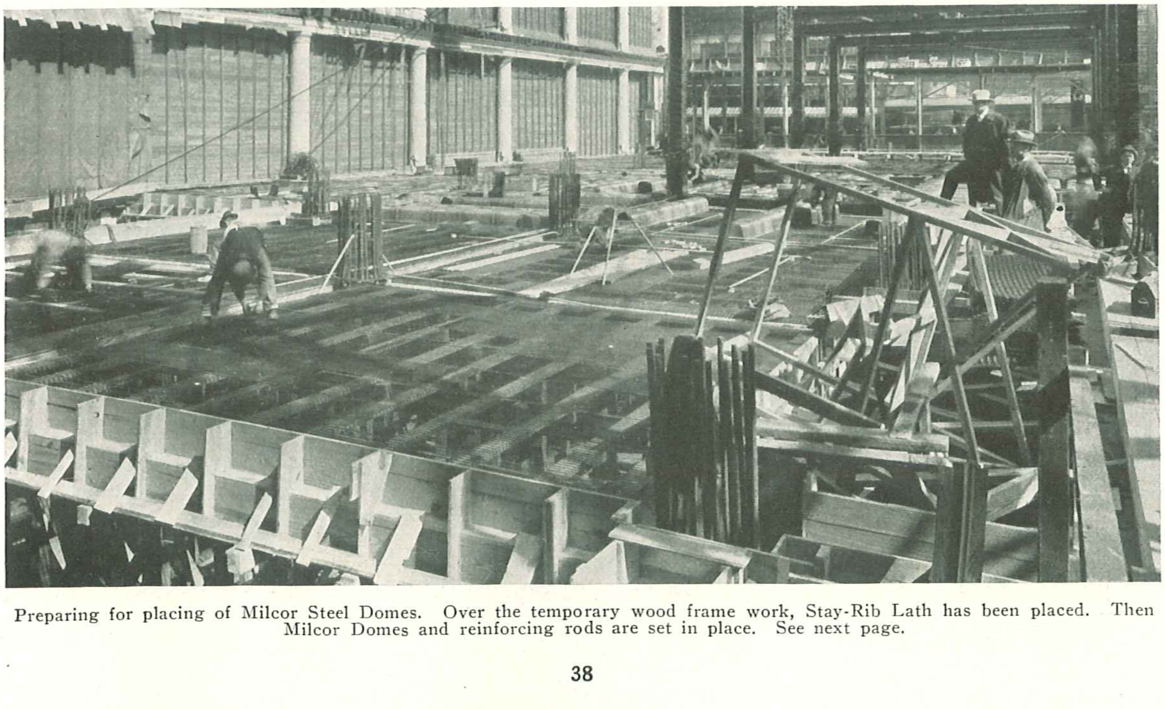
This type of floor construction is probably best described as a series of parallel tee beams of which the flanges are connected to form a solid concrete floor surface. For practically all ordinary cases these beams — or joists, or ribs — are 5 inches or 6 inches in width and are spaced 25 inches or 26 inches on centers or 20 inches apart in the clear. The flanges, or topping, are in such instances usually 2 inches or 2½ inches thick. By way of illustration this floor system can be visualized as being not unlike wood joist construction such as used in frame buildings.

For fabricating these floors MILCOR STEEL DOMES are placed on the wood formwork in the manner described below and concrete is poured over them to a thickness of the depth of the Dome plus 2 inches or 2½ inches as the case may be. This procedure, when considered from the standpoint of utilizing the domes to eliminate an excess of concrete from an otherwise solid slab of the same thickness, presents striking comparisons between MILCOR STEEL DOME FLOORS and ordinary solid slabs or flat slabs. As much as 50% or 60% of the amount of concrete necessary for the latter can be saved by concentrating the strength of the slab into joists such as are formed with MILCOR STEEL DOMES. Such saving in concrete obviously results in greatly reduced weight of construction, which consequently means lighter beams, columns, and footings.

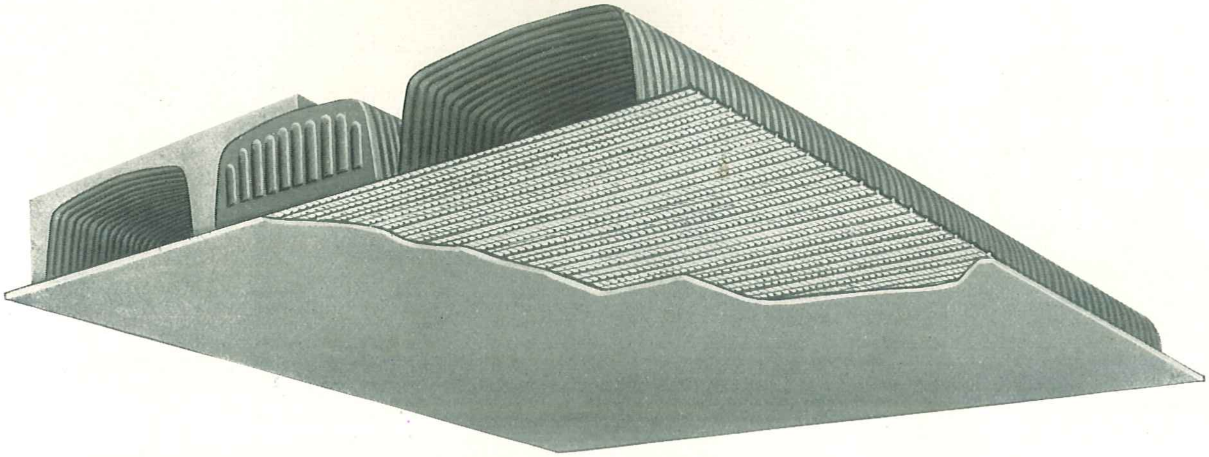


MILCOR STEEL DOME FLOORS, compared with rib slabs formed with terra cotta or clay tile, show a very definite saving in weight and expense of handling, due to the fact that terra cotta tile are about 30 times as heavy as MILCOR DOMES for an equal area and require about four times the amount of handling because of the smaller dimensions of each tile.

The sound-proof quality of MILCOR STEEL DOME FLOORS, due to the perfect insulation provided by the dead air spaces under the Domes when an attached plastered ceiling is used, presents another distinct benefit derived from their use. Also, apart from any direct permanent structural gain, the speed of erection and the drying-out process of the structure are greatly augmented by the elimination of all but these small concentrated masses of concrete. In the light of floor lay-out, again, these features present an extremely satisfactory method in that long spans may be had without the customary beam obstructions and otherwise inevitable encroachments on practical economy. These



Preparing for placing of Milcor Steel Domes. Over the temporary wood frame work, Stay-Rib Lath has been placed. Then Milcor Domes and reinforcing rods are set in place. See next page.

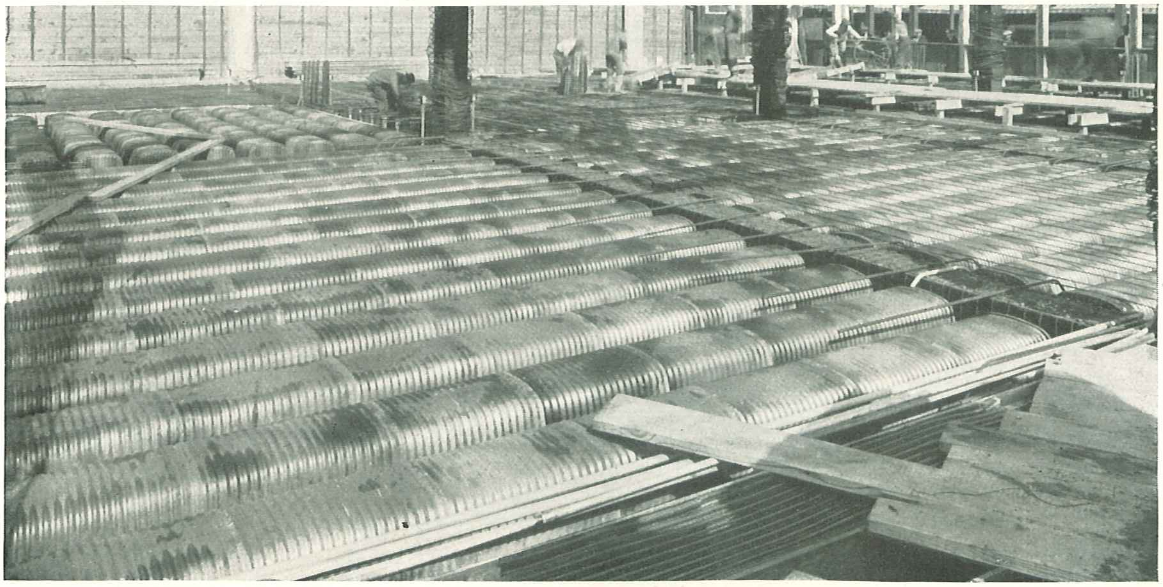


qualities, and others, when summed up, afford an insight into the reason for the well-established precedent in this direction and for many an architect's and engineer's satisfied clientele.

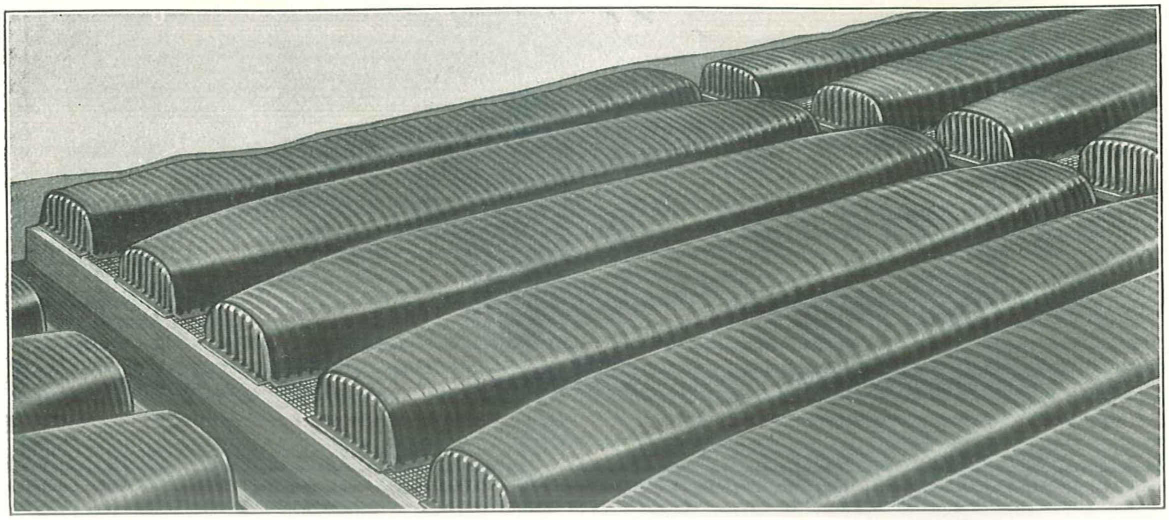
Specifications of Milcor Steel Domes

MILCOR STEEL DOMES are manufactured in three weights of U. S. Standard Gauge sheets, 26 Gauge, 24 Gauge, and 22 Gauge. They are formed with deep corrugations in the top and sides, which, together with a ⅜-inch crown in the top, offer maximum rigidity of formwork. Six heights of Domes are carried in stock, namely, 4-inch, 6-inch, 8-inch, 10-inch, 12-inch, and 14-inch, which are sufficiently adequate for all conditions. Lengths of Domes are 30 inches and 35 inches, these allowing for enough combinations in rows to cover all spans. All straight MILCOR DOMES are 20 inches in width at the bottom with a 1-inch flange on either side to facilitate nailing to the wooden soffits.

(Continued on next page.)



Milcor Domes completely placed on the same floor illustrated on preceding page. This photo was taken at Gimbel Bros. Department Store, Milwaukee.



Milcor Single Tapered Steel Domes in Position.

(*Specification Data continued from page 39.*)

MILCOR END CAPS are formed from 28 U. S. Standard Gauge sheets to provide a tight-fitting closing for each row of Domes.

For cases of special design, in which an excessive shearing stress must be provided for at the ends of joists, MILCOR Warehouses are equipped to furnish single and double-tapered Domes.

Single-tapered MILCOR DOMES have a standard cross-section at one end while the width of the other end is decreased from 20 inches to 15 inches, the sides tapering accordingly and the height remaining constant. MILCOR Single-tapered Domes afford a method of taking care of high negative concrete stresses at supports as well as high shearing stresses, thus permitting heavier loadings and longer spans without the necessity for additional floor thickness.

MILCOR Double-tapered Steel Domes are similar in all respects to MILCOR Single-tapered Steel Domes except for a decrease in the height of 2½ inches at one end as well as a decrease in width. This, for the reason that they will permit the added advantage of placing the concrete in a supporting tee beam where it is useful and prohibit a waste where it can be avoided. For instance, the flange of such a tee beam when used in connection with this type of construction can be reduced from 6 feet in width to 4 feet in width (a decrease of 1 foot on each side) by concentrating the concrete necessary for compression where it will be most useful, and still the strength of the beam is unimpaired.

All MILCOR Tapered Steel Domes are 35 inches in length and are made in all heights except 4 inches. Special MILCOR End Caps are furnished to securely close the small ends of the Domes.

Method of Placing Milcor Steel Domes

In cases where ceilings are required directly under the concrete joists, MILCOR STAY-RIB Lath is placed on the forms, followed by the setting of 26 Gauge MILCOR STEEL DOMES. The Domes are nailed lightly to the soffit boards, the rows being 5 inches or 6 inches apart, according to the width of joists required. After this, the reinforcing rods are set in place, and to these the Lath (already in place) is wired.

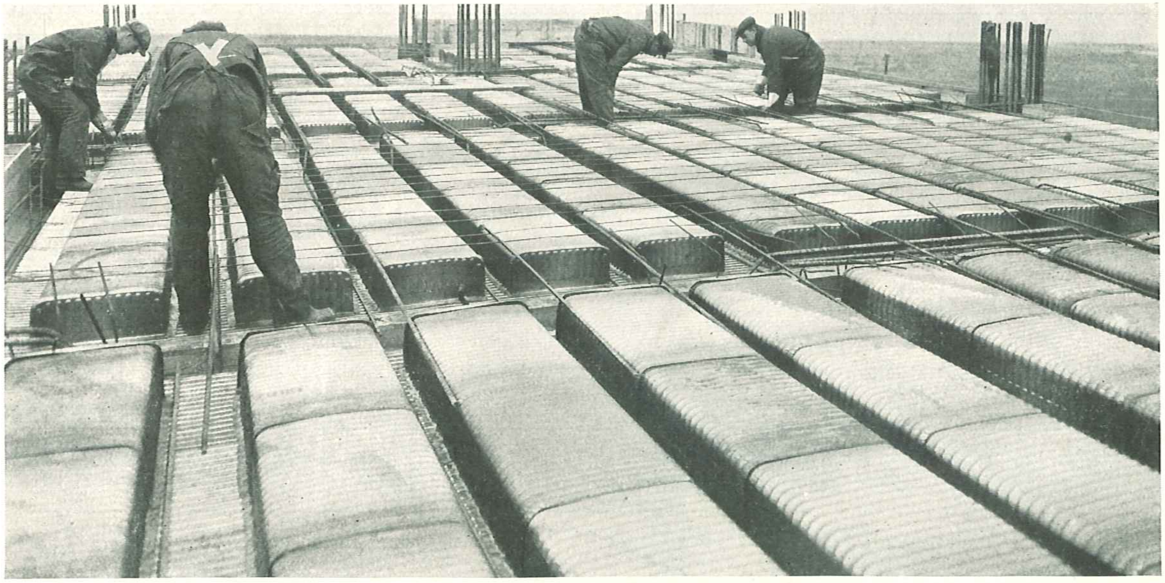
After the concrete has been poured and has set sufficiently, the wooden shoring and formwork are removed and the Lath is ready for plastering. It should be noted that these 26 Gauge (permanent) Domes are allowed to remain "buried." 24 Gauge and 22 Gauge (removable) MILCOR STEEL DOMES, when used, should be removed and re-used and attachments imbedded in the concrete so that the Lath may be attached after the forms are removed.

Suspended ceilings and furred ceilings can be provided by similarly suspending from the concrete 1/4-inch Round Hanger Rods to which 1 1/2-inch or 2-inch MILCOR Cold Rolled Runner Channels are attached at intervals of 4 feet. To these in turn are tied at right angles the furring channels (1-inch or 3/4-inch MILCOR Channels) which are spaced 12 inches or 16 inches on centers so that MILCOR STAY-RIB Metal Lath or MILCOR NETMESH DIAMOND EXPANDED Metal Lath may be wired to them and provide a flat plastering surface of the greatest possible rigidity. In this latter case, 26 Gauge DOMES may be removed or allowed to remain, as desired.

Ultra-Economic Qualities of Milcor Domes

Emphasis must be laid on the fact that MILCOR STEEL DOMES are primarily a formwork installed with a view of eliminating all unnecessary concrete. MILCOR Engineers have adhered strictly to this principle and MILCOR DOMES are designed with this as the paramount consideration. Consequently, as compared to other corrugated forms, a claim of ultra-economy can be substantiated to the extent of a saving of 6 to 12 per cent in concrete over others. This, by virtue of the fact that the sides of MILCOR Steel Domes are tapered toward the top only to a minimum degree while others have sides of considerably more taper.

A comparative study of our tables and details included herein will further impress on the mind this very distinct advantage in the use of MILCOR STEEL DOMES.



Another big Milcor Steel Dome job in progress at the Elks Club House, Milwaukee.
Notice the almost perpendicular sides of these domes.

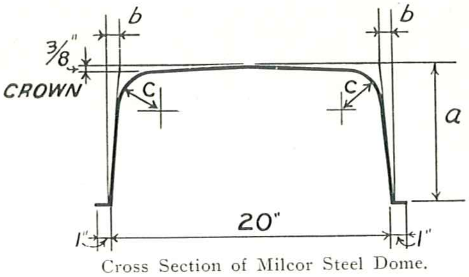
Properties of Reinforced Concrete Floors Formed with Milcor Steel Domes

5″ Joists — 25″ o. c.— with 2″ Concrete Slab				5″ Joists — 25″ o. c.— with 2½″ Concrete Slab			
Height of Dome, inches	Average Weight per Square Foot, Lbs.	Cubic Feet of Concrete per Square Foot	Core Area, %	Height of Dome, inches	Average Weight per Square Foot, Lbs.	Cubic Feet of Concrete per Square Foot	Core Area, %
4	38.3	.255	49.0	4	44.3	.296	45.4
6	43.7	.292	56.3	6	49.7	.333	53.0
8	49.0	.326	60.9	8	55.0	.367	58.0
10	56.3	.376	62.4	10	62.3	.417	60.0
12	62.0	.414	64.6	12	68.0	.455	62.5
14	72.4	.482	63.7	14	78.4	.523	61.9
4″ Joists — 24″ o. c.— with 2″ Concrete Slab				4″ Joists — 24″ o. c.— with 2½″ Concrete Slab			
4	35.2	.234	53.2	4	41.2	.275	49.3
6	39.8	.265	60.3	6	45.8	.306	57.0
8	44.0	.293	64.8	8	50.0	.334	62.0
10	50.5	.336	66.4	10	56.5	.377	63.6
12	55.5	.370	68.2	12	61.5	.411	66.0
14	64.5	.430	67.5	14	70.5	.471	65.7
5″ Joists — 25″ o. c.— with 3″ Concrete Slab				6″ Joists — 26″ o. c.— with 3″ Concrete Slab			
12	74.4	.495	60.4	12	82.0	.545	56.3
14	84.8	.565	60.0	14	93.5	.623	56.0

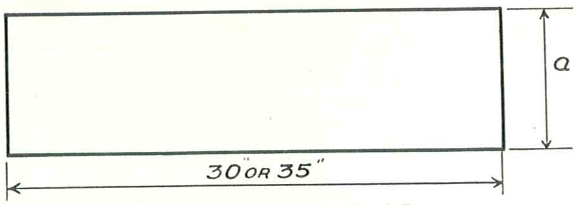
Weights of Milcor Steel Domes and Ends Caps

Size	26 Gauge			24 Gauge			22 Gauge			28 Gauge
	Lbs. per 100 Pieces		Lbs. per 100 Lineal Feet	Lbs. per 100 Pieces		Lbs. per 100 Lineal Feet	Lbs. per 100 Pieces		Lbs. per 100 Lineal Feet	Lbs. per 100 Pieces
	30″	35″		30″	35″		30″	35″		
4″	450	524	175	600	697	232	750	870	291	75
6″	516	600	200	689	800	266	860	1000	333	96
8″	583	677	226	778	904	301	974	1130	376	118
10″	628	730	243	840	975	325	1050	1220	407	138
12″	695	806	269	927	1078	360	1160	1346	449	161
14″	740	860	286	987	1148	383	1230	1430	477	181

Specifications and Dimensions of Milcor Steel Domes



Cross Section of Milcor Steel Dome.



Longitudinal Section of Milcor Steel Dome.

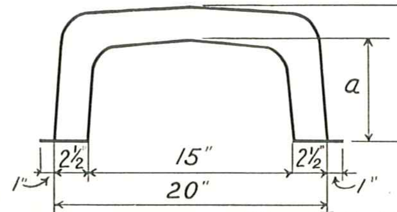
Height (a)	4″	6″	8″	10″	12″	14″
Offset (b)	½″	½″	½″	¾″	¾″	1½″
Radius (c)	2″	2″	2″	3″	3″	3″

- Made of 26, 24, and 22 United States Standard Gauge Sheets.
- All Domes have ⅜-inch deep corrugations.
- Width at bottom — 20 inches.
- Flanges 1 inch wide on each side.
- Crown of ⅜-inch in top.
- Lengths — 30 inches and 35 inches.
- 28-Gauge End Caps furnished to fit securely at ends of rows.

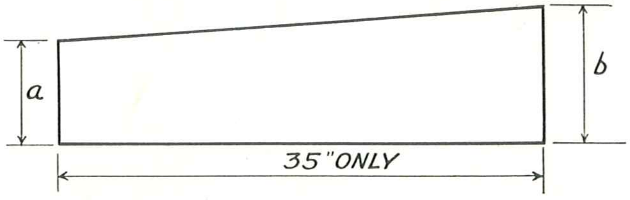
Length and Number of Milcor Steel Domes Required for Various Spans

Clear Span	No. Domes Required		Total Length Dome	No. End Caps	Clear Span	No. Domes Required		Total Length Dome	No. End Caps	Clear Span	No. Domes Required		Total Length Dome	No. End Caps
	30″	35″				30″	35″				30″	35″		
8′0″	1	2	8′ 4″	2	18′9″	2	5	19′ 7″	2	29′6″	4	7	30′ 5″	2
8′3″	0	3	8′ 9″	2	19′0″	2	5	19′ 7″	2	29′9″	3	8	30′10″	2
8′6″	0	3	8′ 9″	2	19′3″	1	6	20′ 0″	2	30′0″	3	8	30′10″	2
8′9″	4	0	10′ 0″	2	19′6″	1	6	20′ 0″	2	30′3″	2	9	31′ 3″	2
9′0″	4	0	10′ 0″	2	19′9″	0	7	20′ 5″	2	30′6″	1	10	31′ 8″	2
9′3″	4	0	10′ 0″	2	20′0″	6	2	20′10″	2	30′9″	1	10	31′ 8″	2
9′6″	4	0	10′ 0″	2	20′3″	6	2	20′10″	2	31′0″	0	11	32′ 1″	2
9′9″	3	1	10′ 5″	2	20′6″	5	3	21′ 3″	2	31′3″	6	6	32′ 6″	2
10′0″	3	1	10′ 5″	2	20′9″	4	4	21′ 8″	2	31′6″	6	6	32′ 6″	2
10′3″	2	2	10′10″	2	21′0″	4	4	21′ 8″	2	31′9″	5	7	32′11″	2
10′6″	2	2	10′10″	2	21′3″	3	5	22′ 1″	2	32′0″	5	7	32′11″	2
10′9″	1	3	11′ 3″	2	21′6″	3	5	22′ 1″	2	32′3″	4	8	33′ 4″	2
11′0″	1	3	11′ 3″	2	21′9″	9	0	22′ 6″	2	32′6″	3	9	33′ 9″	2
11′3″	0	4	11′ 8″	2	22′0″	1	7	22′11″	2	32′9″	3	9	33′ 9″	2
11′6″	5	0	12′ 6″	2	22′3″	1	7	22′11″	2	33′0″	2	10	34′ 2″	2
11′9″	5	0	12′ 6″	2	22′6″	0	8	23′ 4″	2	33′3″	2	10	34′ 2″	2
12′0″	5	0	12′ 6″	2	22′9″	0	8	23′ 4″	2	33′6″	1	11	34′ 7″	2
12′3″	4	1	12′11″	2	23′0″	6	3	23′ 9″	2	33′9″	1	11	34′ 7″	2
12′6″	4	1	12′11″	2	23′3″	5	4	24′ 2″	2	34′0″	0	12	35′ 0″	2
12′9″	3	2	13′ 4″	2	23′6″	5	4	24′ 2″	2	34′3″	6	7	35′ 5″	2
13′0″	3	2	13′ 4″	2	23′9″	4	5	24′ 7″	2	34′6″	5	8	35′10″	2
13′3″	2	3	13′ 9″	2	24′0″	3	6	25′ 0″	2	34′9″	5	8	35′10″	2
13′6″	1	4	14′ 2″	2	24′3″	3	6	25′ 0″	2	35′0″	4	9	36′ 3″	2
13′9″	1	4	14′ 2″	2	24′6″	2	7	25′ 5″	2	35′3″	4	9	36′ 3″	2
14′0″	0	5	14′ 7″	2	24′9″	2	7	25′ 5″	2	35′6″	3	10	36′ 8″	2
14′3″	0	5	14′ 7″	2	25′0″	1	8	25′10″	2	35′9″	2	11	37′ 1″	2
14′6″	6	0	15′ 0″	2	25′3″	0	9	26′ 3″	2	36′0″	2	11	37′ 1″	2
14′9″	5	1	15′ 5″	2	25′6″	0	9	26′ 3″	2	36′3″	1	12	37′ 6″	2
15′0″	5	1	15′ 5″	2	25′9″	6	4	26′ 8″	2	36′6″	1	12	37′ 6″	2
15′3″	4	2	15′10″	2	26′0″	5	5	27′ 1″	2	36′9″	0	13	37′11″	2
15′6″	3	3	16′ 3″	2	26′3″	5	5	27′ 1″	2	37′0″	6	8	38′ 4″	2
15′9″	3	3	16′ 3″	2	26′6″	4	6	27′ 6″	2	37′3″	6	8	38′ 4″	2
16′0″	2	4	16′ 8″	2	26′9″	4	6	27′ 6″	2	37′6″	5	9	38′ 9″	2
16′3″	2	4	16′ 8″	2	27′0″	3	7	27′11″	2	37′9″	4	10	39′ 2″	2
16′6″	1	5	17′ 1″	2	27′3″	2	8	28′ 4″	2	38′0″	4	10	39′ 2″	2
16′9″	0	6	17′ 6″	2	27′6″	2	8	28′ 4″	2	38′3″	3	11	39′ 7″	2
17′0″	0	6	17′ 6″	2	27′9″	1	9	28′ 9″	2	38′6″	3	11	39′ 7″	2
17′3″	6	1	17′11″	2	28′0″	1	9	28′ 9″	2	38′9″	2	12	40′ 0″	2
17′6″	5	2	18′ 4″	2	28′3″	0	10	29′ 2″	2	39′0″	1	13	40′ 5″	2
17′9″	5	2	18′ 4″	2	28′6″	6	5	29′ 7″	2	39′3″	1	13	40′ 5″	2
18′0″	4	3	18′ 9″	2	28′9″	6	5	29′ 7″	2	39′6″	0	14	40′10″	2
18′3″	4	3	18′ 9″	2	29′0″	5	6	30′ 0″	2	39′9″	6	9	41′ 3″	2
18′6″	3	4	19′ 2″	2	29′3″	4	7	30′ 5″	2	40′0″	6	9	41′ 3″	2

Specifications and Dimensions of Milcor Single and Double Tapered Domes



Cross Section of Milcor Double Tapered Dome.



Longitudinal Section of Milcor Double Tapered Dome.

Size	6	8	10	12	14
Small End (a)	3½″	5½″	7½″	9½″	11½″
Large End (b)	6″	8″	10″	12″	14″

Milcor Single Tapered Domes are the same as Milcor Double Tapered Domes, except that they have no vertical taper, that is, the dimensions "a" and "b" are the same on Single Tapered Domes.

Milcor Tapered Domes made only in 6, 8, 10, 12, and 14-inch sizes and all are 35 inches long.

Milcor Reinforced Concrete Design

THIS article assumes that those who use these computations and tables have a primary understanding of the fundamental principles of Reinforced Concrete Design. These principles, however, are based on certain assumptions which in essence are as follows:

1. If when a beam is not loaded, a plane cross-section be made, this cross-section will still be a plane after the load is put on and bending takes place. (Navier's hypothesis.)
2. The stress is proportional to the deformation. (Hooke's Law.)
3. The bond between the steel and concrete is sufficiently great to cause the two materials to act together.
4. The tensile strength of concrete is considered as nil.
5. The ratio of the Modulus of Elasticity of steel to that of concrete of a 1:2:4 mix, is 15.

Notations

Notations as customarily used in reinforced concrete design and as employed in the following computations and formulaes are:

M = The bending moment in inch-pounds.

T = The total tension in the steel.

C = The total compression in the concrete.

fs = The unit fibre stress of the steel.

fc = The unit fibre stress of the concrete.

Es = The modulus of elasticity of the steel.

Ec = The modulus of elasticity of the concrete in compression.

n = The ratio of Es to Ec.

b = The width of a rectangular beam or width of the flange of a tee-beam (in inches).

b′ = The width of the stem of a tee-beam (in inches).

d = The distance from the top of the compressive face of the concrete to the center of gravity of the steel (in inches).

N. A. = Neutral axis of the section.

k = The ratio of the depth of the neutral axis to the depth d.

t = Thickness of flange.

As = The cross-sectional area of steel.

p = The ratio of the area of steel to the effective area of concrete = $\frac{As}{bd}$

z = The distance from top of concrete to the centroid of the compression area.

jd = The arm of the resisting couple (inches) = d — z.

V = Total Vertical Shear at a given section.

v = Unit Vertical Shear at a given section = $\frac{V}{bjd}$ (in lbs. per sq. in.)

W = Total load on beam = wl.

w = Load on beam per linear foot.

l = Span of beam in feet.

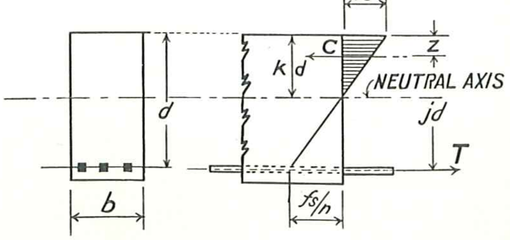


Diagram of Stress — Rectangular Beam.

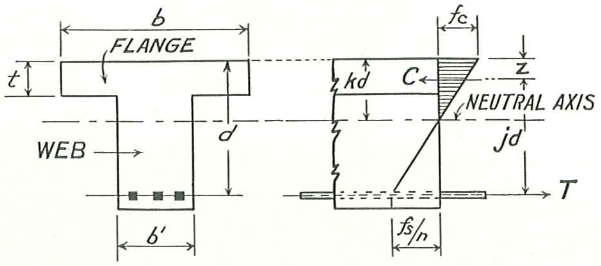


Diagram of Stress — Tee-Beam.

Formulas

Rectangular Beams

$$k = \sqrt{2\,pn + (pn)^2} - pn = \frac{1}{1 + \frac{fs}{nfc}}$$

$$j = 1 - 1/3\,k.$$

$$p = \frac{As}{bd}$$

$$fc = \frac{2M}{jkbd^2} = \frac{2pfs}{k}$$

$$fs = \frac{M}{Asjd}$$

$$As = \frac{M}{fsjd} \text{ or } pbd.$$

Tee Beams

$$k = \frac{1}{1 + \frac{fs}{nfc}}$$

$$kd = \frac{2nd\,As + bt^2}{2n\,As + 2bt}$$

$$z = \frac{3kd - 2t}{2kd - t} \times \frac{t}{3}$$

$$jd = d - z$$

$$As = \frac{M}{fsjd}$$

$$fc = \frac{Mkd}{bt \times jd\,(kd - \tfrac{1}{2}t)}$$

Shear Reinforcement

$$v = \frac{V}{bjd} \text{ or } \frac{V}{\text{shear area of joist}} \text{ (for joist construction)}$$

$$s = \frac{As\,fs\,jd}{V'}$$ in which s = horizontal spacing at any given section.

$V' = V - 60\,bjd$ = total shear producing stress in reinforcement.

Typical Example of Design of Rib-Slab Formed by Milcor Steel Domes

Span = 23′-0″. Live Load = 75 lbs. per sq. ft.

fs = 18000 lbs. per sq. in. fc = 700 lbs. per sq. in.

n = 15.

Construction assumed to be freely supported at one end and continuous at the other, so $M = \frac{Wl}{10}$ or $\frac{wl^2}{10}$

Assume 12″ Milcor Dome + 2″ Concrete Slab, with joists 5″ wide at bottom, spaced 25″ on centers.

d = 12″ + 2″ — ¾″ (fire-proofing) — ½″ (half diameter of a 1″ bar) = 12¾″.

Summation of Load per sq. ft. of floor.

L. L. = Live Load = 75. lbs.

D. L. = Dead Load { Slab and joist 62.0
Floor finish 12.
Ceiling 7.5

156.5 lbs. per sq. ft. × 2.08 = 325.5 lbs. per lineal ft. of joist.

$$M = \frac{325.5 \times 23^2 \times 12}{10} = 207{,}000 \text{ inch pounds.}$$

Assume jd to be (d — ½t) = 11.75 in. which is always on the safe side.

$$\text{Therefore } As = \frac{M}{fsjd} = \frac{207{,}000}{18000 \times 11.75} = .98 \text{ sq. in.}$$

Use { 1 — ⅞-in. Round Bar
1 — ¾-in. Round Bar

$$V = \text{Maximum end shear} = \frac{325.5 \times 23}{2} = 3740 \text{ lbs.}$$

$$v = \text{Unit Shear} = \frac{3740}{75.0} = 50 \text{ lbs. per sq. in.}$$ which is well below 60 lbs. per sq. in. allowed.

(75.0 sq. in. is the shear area for a 12 + 2 joist.)

If, however, results from the application of Tee-Beam formulas instead of the approximate (jd = d — ½t) are required, the computations are as follows:

(NOTE: These formulas apply only when kd is greater than 2 inches in which case the Neutral Axis is in the Web.)

$$kd = \frac{2nd\,As + bt^2}{2n\,As + 2bt} = \frac{2 \times 15 \times 12.75 \times .98 + 25 \times 4}{2 \times 15 \times .98 + 2 \times 25 \times 2} = 3.66$$

$$z = \frac{3kd - 2t}{2kd - t} \times \frac{t}{3} = \frac{3 \times 3.66 - 4}{2 \times 3.66 - 2} \times \frac{2}{3} = .878$$

$$jd = 12.75 - .878 = 11.872$$

$$As = \frac{207{,}000}{18000 \times 11.872} = .968 \text{ sq. in.}$$

Use { 1 — ⅞-in. Round Bar
1 — ¾-in. Round Bar

Explanation of Milcor Tables

THE tabulations on the following pages indicate safe *total loads* uniformly distributed per square foot of surface area for floors or roofs constructed with Milcor Steel Domes spaced 25 inches center to center and having 5-inch wide concrete joists, reinforced with steel rods of standard fabrication.

These tables are based on fc (unit fibre stress of concrete) = 700 pounds per square inch and fs (unit fibre stress of steel) = 18,000 pounds per square inch. The concrete over the Domes has been figured at a depth of 2 inches and 2½ inches for Domes 4, 6, 8, 10, or 12 inches high and at a depth of 2½ and 3 inches for Domes 14 inches high. These dimensions may be varied to suit individual conditions.

Fire-proofing of all reinforcing steel has been figured at ¾ inches clear, from the bottom of the joists to the extreme lower surface of the steel. The effective depth, "d," is taken from the center of gravity of the steel rods to the top of the concrete. Between bars, sufficient concrete has been allowed to produce a perfect bond for all reinforcing bar sizes.

Bending moments $\frac{WL}{8}$, $\frac{WL}{10}$, $\frac{WL}{12}$, have been computed and the safe total loads per square foot, for various spans, have been accurately determined. The full dead weight of construction, the live load and all other super-imposed loads per square foot of floor area, are included in these figures.

To obtain the safe live load, deduct from the figures given in the table, the weight of construction (as you read it in the table in question); then also deduct the weights of flooring, partitions, ceilings, etc.

Values to the right or above the heavy lines exceed 60 pounds per square inch in shear and require stirrups of suitable size to take care of excess shear. In no case does the combined shear in concrete and steel exceed 120 pounds per square inch. For continuous action, one bar in each joist should be bent up at the quarter point and should extend to the quarter point of the adjacent span.

To prevent cracks in the concrete from contraction or expansion after setting, use ¼-inch round rods, 12 inches center to center, for 2-inch topping; ⅜-inch round rods, 24 inches center to center for 2½-inch topping, and ⅜-inch round rods, 18 inches center to center for 3-inch topping — at right angles to the joists.

To compute the safe load for fc = 650 pounds per square inch and fs = 16000 pounds per square inch, take 8/9ths of the values given in the tables.

For further information regarding Milcor Materials or their uses and adaptations, write to the Engineering Department, Milwaukee Corrugating Company, Milwaukee, Wisconsin. We shall be glad to co-operate in making your designs and in co-ordinating Milcor Products with your plans.

4″ Milcor Steel Domes + 2″ Concrete

Safe Total Load Uniformly Distributed per Square Foot. 5″ Joists — 25″ O. C.

Weight per Square Foot of Slab Area = 38.3 Lbs.
Concrete per Square Foot of Slab Area = .255 Cubic Feet.
Shear Area = 29.2 Square Inches.
Core Area of Section = 49.0 Per Cent.

fs = 18000 Lbs. per Sq. In. fc = 700 Lbs. per Sq. In.
FOR STRESSES OF —
fs = 16,000 Lbs. per Square Inch, and
fc = 650 Lbs. per Square Inch, — USE 8/9 of values below.

Area of Steel	.22 Square Inch			.31 Square Inch			.39 Square Inch			.45 Square Inch			.50 Square Inch		
Bars { Straight Bent	1-⅜″ Round 1-⅜″ Round			1-⅜″ Round 1-½″ Round			1-½″ Round 1-½″ Round			1-½″ Round 1-½″ Square			1-½″ Square 1-½″ Square		
Span	$\frac{WL}{8}$	$\frac{WL}{10}$	$\frac{WL}{12}$	$\frac{WL}{8}$	$\frac{WL}{10}$	$\frac{WL}{12}$	$\frac{WL}{8}$	$\frac{WL}{10}$	$\frac{WL}{12}$	$\frac{WL}{8}$	$\frac{WL}{10}$	$\frac{WL}{12}$	$\frac{WL}{8}$	$\frac{WL}{10}$	$\frac{WL}{12}$
5-0	225	281	338	313	392	470	404	505	606	453	565	680	507	633	...
6-0	157	196	235	218	272	326	280	350	420	315	394	472	351	440	527
7-0	115	145	173	160	200	240	206	258	309	232	290	347	258	324	388
8-0	90	110	133	122	153	183	157	197	236	177	222	266	198	247	296
9-0	70	88	105	97	121	145	125	156	187	140	175	210	156	195	235
10-0	57	72	85	78	97	117	101	127	152	113	142	170	126	158	190
11-0	47	58	70	65	81	97	84	104	125	94	117	140	105	131	157
12-0	40	49	59	55	68	82	70	86	105	79	98	118	88	110	132
13-0	...	...	...	47	58	70	59	74	88	67	84	101	75	94	112
14-0	...	...	...	...	...	60	51	64	76	58	73	87	65	81	97
15-0	...	...	...	...	...	...	44	55	66	50	63	76	56	70	84
16-0	...	...	...	...	...	...	...	...	58	44	55	66	49	62	74
17-0	...	...	...	...	...	...	...	...	...	...	...	...	44	55	66

Figures above Heavy Lines are Loads for which Unit Shear is over 60 lbs. per Square Inch.

4″ Milcor Steel Domes + 2½″ Concrete

Safe Total Load Uniformly Distributed per Square Foot. 5″ Joists — 25″ O. C.

Weight per Square Foot of Slab Area = 44.3 Lbs.
Concrete per Square Foot of Slab Area = .296 Cubic Feet.
Shear Area = 31.5 Square Inches.
Core Area of Section = 45.4 Per Cent.

fs = 18000 Lbs. per Sq. In. fc = 700 Lbs. per Sq. In.
FOR STRESSES OF —
fs = 16,000 Lbs. per Square Inch, and
fc = 650 Lbs. per Square Inch, — USE 8/9 of values below.

Area of Steel	.22 Square Inch			.31 Square Inch			.39 Square Inch			.45 Square Inch			.50 Square Inch		
Bars { Straight Bent	1-⅜″ Round 1-⅜″ Round			1-⅜″ Round 1-½″ Round			1-½″ Round 1-½″ Round			1-½″ Round 1-½″ Square			1-½″ Square 1-½″ Square		
Span	$\frac{WL}{8}$	$\frac{WL}{10}$	$\frac{WL}{12}$	$\frac{WL}{8}$	$\frac{WL}{10}$	$\frac{WL}{12}$	$\frac{WL}{8}$	$\frac{WL}{10}$	$\frac{WL}{12}$	$\frac{WL}{8}$	$\frac{WL}{10}$	$\frac{WL}{12}$	$\frac{WL}{8}$	$\frac{WL}{10}$	$\frac{WL}{12}$
6-0	172	215	258	240	300	360	302	377	453	348	435	522	387	480	580
7-0	127	158	190	176	220	264	221	277	332	255	320	383	284	355	427
8-0	97	121	145	135	168	202	169	212	254	196	245	294	218	272	326
9-0	77	96	115	107	133	160	134	167	201	154	194	232	172	214	258
10-0	62	79	95	87	108	130	108	136	163	125	156	188	139	174	209
11-0	51	64	77	71	89	107	90	112	135	103	129	155	115	144	172
12-0	44	54	65	60	75	90	75	94	113	87	109	130	96	121	145
13-0	...	...	...	51	64	77	64	80	96	74	93	111	82	103	123
14-0	...	...	...	44	55	66	55	69	83	64	80	96	71	86	106
15-0	...	...	...	...	...	...	48	60	72	55	69	83	62	77	93
16-0	...	...	...	...	...	...	42	53	64	49	61	73	54	68	82
17-0	...	...	...	...	...	...	...	...	...	43	54	65	48	60	72
18-0	...	...	...	...	...	...	...	...	...	...	...	...	43	54	64

Figures above Heavy Lines are Loads for which Unit Shear is over 60 lbs. per Square Inch.

6″ Milcor Steel Domes + 2″ Concrete

Safe Total Load Uniformly Distributed per Square Foot. 5″ Joists — 25″ O. C.

Weight per Square Foot of Slab Area = 43.7 Lbs.
Concrete per Square Foot of Slab Area = .292 Cubic Feet.
Shear Area = 40.25 Inches.
Core Area of Section = 56.3 Per Cent.

fs = 18000 Lbs. per Sq. In. fc = 700 Lbs. per Sq. In.
FOR STRESSES OF —
fs = 16,000 Lbs. per Square Inch, and
fc = 650 Lbs. per Square Inch, — USE 8/9 of values below.

Area of Steel	.39 Square Inch			.50 Square Inch			.614 Square Inch			.75 Square Inch			.88 Square Inch		
Bars { Straight Bent	1-½″ Round 1-½″ Round			1-½″ Square 1-½″ Square			1-⅝″ Round 1-⅝″ Round			1-⅝″ Round 1-¾″ Round			1-¾″ Round 1-¾″ Round		
Span	$\frac{WL}{8}$	$\frac{WL}{10}$	$\frac{WL}{12}$	$\frac{WL}{8}$	$\frac{WL}{10}$	$\frac{WL}{12}$	$\frac{WL}{8}$	$\frac{WL}{10}$	$\frac{WL}{12}$	$\frac{WL}{8}$	$\frac{WL}{10}$	$\frac{WL}{12}$	$\frac{WL}{8}$	$\frac{WL}{10}$	$\frac{WL}{12}$
7-0	284	355	426	362	453	543	440	550	660	537	674	...	623	...	...
8-0	218	272	326	277	346	415	331	421	505	412	515	...	478	596	...
9-0	172	215	258	229	274	329	267	334	400	326	408	490	377	471	...
10-0	139	174	209	177	222	266	216	270	324	264	330	396	306	384	460
11-0	115	144	173	147	183	220	178	222	267	218	273	327	253	317	380
12-0	97	121	145	123	154	185	150	185	225	183	229	275	213	267	320
13-0	83	103	124	111	139	167	127	159	191	156	195	234	181	227	271
14-0	71	89	107	92	113	136	110	130	165	135	168	202	156	196	235
15-0	62	78	93	78	98	118	96	120	144	118	147	176	136	171	205
16-0	55	69	82	71	88	105	85	105	126	103	130	155	120	150	180
17-0	48	60	72	62	78	93	76	95	113	92	114	137	106	133	159
18-0	43	53	64	56	68	82	68	85	101	82	102	122	95	119	142
19-0	...	...	...	50	62	75	61	76	90	73	92	110	85	106	128
20-0	...	...	...	45	56	68	55	67	81	66	82	99	77	96	115
21-0	...	...	...	...	51	61	50	62	73	60	75	90	70	87	105
22-0	...	...	...	...	...	...	45	57	67	55	68	82	63	79	95
23-0	...	...	...	...	...	...	...	52	66	50	62	75	58	73	87
24-0	...	...	...	...	...	...	...	47	56	46	57	69	53	67	80
25-0	...	...	...	...	...	...	...	...	...	...	53	64	49	62	74
26-0	...	...	...	...	...	...	...	...	...	...	49	59	45	57	68
27-0	...	...	...	...	...	...	...	...	...	...	...	...	...	53	64
28-0	...	...	...	...	...	...	...	...	...	...	...	...	...	50	59

Figures above Heavy Lines are Loads for which Unit Shear is over 60 lbs. per Square Inch.

6″ Milcor Steel Domes + 2½″ Concrete

Safe Total Load Uniformly Distributed per Square Foot. 5″ Joists — 25″ O. C.

Weight per Square Foot of Slab Area = 49.7 Lbs.
Concrete per Square Foot of Slab Area = .333 Cubic Feet.
Shear Area = 43.2 Square Inches.
Core Area of Section = 53.0 Per Cent.

fs = 18000 Lbs. per Sq. In. fc = 700 Lbs. per Sq. In.
FOR STRESSES OF —
fs = 16,000 Lbs. per Square Inch, and
fc = 650 Lbs. per Square Inch, — USE 8/9 of values below.

Area of Steel	.39 Square Inch			.50 Square Inch			.614 Square Inch			.75 Square Inch			.88 Square Inch		
Bars { Straight Bent	1-½″ Round 1-½″ Round			1-½″ Square 1-½″ Square			1-⅝″ Round 1-⅝″ Round			1-⅝″ Round 1-¾″ Round			1-¾″ Round 1-¾″ Round		
Span	$\frac{WL}{8}$	$\frac{WL}{10}$	$\frac{WL}{12}$	$\frac{WL}{8}$	$\frac{WL}{10}$	$\frac{WL}{12}$	$\frac{WL}{8}$	$\frac{WL}{10}$	$\frac{WL}{12}$	$\frac{WL}{8}$	$\frac{WL}{10}$	$\frac{WL}{12}$	$\frac{WL}{8}$	$\frac{WL}{10}$	$\frac{WL}{12}$
8-0	232	288	348	297	372	447	361	451	541	442	550	...	513	640	...
9-0	184	229	275	235	294	353	286	357	428	350	437	525	405	507	...
10-0	148	185	222	190	238	286	231	288	346	283	354	425	330	412	495
11-0	123	153	184	157	196	236	191	238	286	234	292	352	272	340	408
12-0	103	129	155	132	165	198	161	201	241	196	246	295	229	286	343
13-0	88	110	132	112	141	169	137	171	205	167	209	251	195	244	292
14-0	76	95	114	97	122	146	118	148	177	144	181	217	168	210	252
15-0	66	82	99	85	106	127	103	138	154	126	157	189	147	183	220
16-0	58	73	87	74	93	112	90	113	135	111	138	166	129	161	193
17-0	51	64	77	66	83	99	80	100	120	98	123	147	114	143	171
18-0	...	58	69	59	74	88	72	89	107	88	109	131	102	127	153
19-0	...	52	62	53	66	79	65	80	96	79	98	118	92	114	137
20-0	...	...	56	48	60	72	59	73	87	71	89	106	83	103	124
21-0	...	...	...	...	54	65	53	66	79	64	80	97	75	94	112
22-0	...	...	...	...	...	59	48	60	72	59	73	89	68	85	102
23-0	...	...	...	...	...	...	...	55	66	54	67	81	63	78	94
24-0	...	...	...	...	...	...	...	...	60	49	62	74	57	72	86
25-0	...	...	...	...	...	...	...	...	...	...	57	68	53	66	79
26-0	...	...	...	...	...	...	...	...	...	...	53	63	49	61	73
27-0	...	...	...	...	...	...	...	...	...	...	...	59	...	57	68
28-0	...	...	...	...	...	...	...	...	...	...	...	...	...	53	63
29-0	...	...	...	...	...	...	...	...	...	...	...	...	...	...	59

Figures above Heavy Lines are Loads for which Unit Shear is over 60 lbs. per Square Inch.

8″ Milcor Steel Domes + 2″ Concrete

Safe Total Load Uniformly Distributed per Square Foot. 5″ Joists — 25″ O. C.

Weight per Square Foot of Slab Area = 49.0 Lbs.
Concrete per Square Foot of Slab Area = .326 Cubic Feet.
Shear Area = 51.8 Square Inches.
Core Area of Section = 60.9 Per Cent.

fs = 18000 Lbs. per Sq. In. fc = 700 Lbs. per Sq. In.
FOR STRESSES OF —
fs = 16,000 Lbs. per Square Inch, and
fc = 650 Lbs. per Square Inch, — USE 8/9 of values below.

Area of Steel	.50 Square Inch			.614 Square Inch			.75 Square Inch			.88 Square Inch			1.04 Square Inch			1.20 Square Inch		
Bars Str. Bars Bent	1-½″ Square 1-½″ Square			1-⅝″ Round 1-⅝″ Round			1-⅝″ Round 1-¾″ Round			1-¾″ Round 1-¾″ Round			1-¾″ Round 1-⅞″ Round			1-⅞″ Round 1-⅞″ Round		
Span	WL/8	WL/10	WL/12	WL/8	WL/10	WL/12	WL/8	WL/10	WL/12	WL/8	WL/10	WL/12	WL/8	WL/10	WL/12	WL/8	WL/10	WL/12
10-0	228	285	343	278	347	417	341	426	512	397	496	595	467	583	...	535	...	...
11-0	189	236	283	230	287	345	282	352	423	328	410	492	386	484	580	444	555	...
12-0	158	198	238	193	242	290	237	296	356	276	344	413	325	406	488	374	467	...
13-0	135	169	202	165	206	247	202	252	303	234	294	352	277	346	415	317	396	476
14-0	116	146	175	142	178	213	174	217	261	202	253	304	239	298	358	274	342	410
15-0	101	127	152	123	154	185	152	190	228	176	220	264	208	260	312	238	298	357
16-0	89	112	134	109	136	163	133	166	200	155	194	232	183	228	274	210	262	314
17-0	79	99	118	96	120	144	118	147	177	137	172	206	162	202	243	186	232	278
18-0	71	88	106	86	108	129	105	131	158	122	153	184	145	180	216	166	200	248
19-0	63	79	95	77	97	116	95	118	142	110	137	165	130	162	195	148	185	222
20-0	57	72	86	70	87	104	85	106	128	100	124	149	117	146	175	134	162	201
21-0	52	65	78	63	79	94	77	97	116	90	112	135	106	133	159	122	152	182
22-0	...	59	71	57	72	86	71	88	106	82	102	123	97	121	145	111	138	165
23-0	...	54	65	53	67	80	65	81	97	75	94	112	89	111	133	101	126	151
24-0	...	...	60	...	60	72	59	74	89	69	86	103	81	101	122	93	117	140
25-0	...	...	55	...	57	68	55	68	82	64	80	95	75	94	112	86	108	129
26-0	...	...	...	...	52	63	...	63	76	59	73	88	69	87	104	79	99	119
27-0	...	...	...	...	...	58	...	59	71	55	68	82	64	80	97	73	91	110
28-0	...	...	...	...	...	54	...	54	65	...	63	76	60	75	90	80	85	102
29-0	...	...	...	...	...	...	...	...	61	...	59	71	56	70	84	63	79	95
30-0	...	...	...	...	...	...	...	...	57	...	55	66	...	65	78	59	74	89

Figures above Heavy Lines are Loads for which Unit Shear is over 60 lbs. per Square Inch.

8″ Milcor Steel Domes + 2½″ Concrete

Safe Total Load Uniformly Distributed per Square Foot. 5″ Joists — 25″ O. C.

Weight per Square Foot of Slab Area = 55.0 Lbs.
Concrete per Square Foot of Slab Area = .367 Cubic Feet.
Shear Area = 54.7 Square Inches.
Core Area of Section = 58.0 Per Cent.

fs = 18000 Lbs. per Sq. In. fc = 700 Lbs. per Sq. In.
FOR STRESSES OF —
fs = 16,000 Lbs. per Square Inch, and
fc = 650 Lbs. per Square Inch, — USE 8/9 of values below.

Area of Steel	.50 Square Inch			.614 Square Inch			.75 Square Inch			.88 Square Inch			1.04 Square Inch			1.20 Square Inch		
Bars Str. Bars Bent	1-½″ Square 1-½″ Square			1-⅝″ Round 1-⅝″ Round			1-⅝″ Round 1-¾″ Round			1-¾″ Round 1-¾″ Round			1-¾″ Round 1-⅞″ Round			1-⅞″ Round 1-⅞″ Round		
Span	WL/8	WL/10	WL/12	WL/8	WL/10	WL/12	WL/8	WL/10	WL/12	WL/8	WL/10	WL/12	WL/8	WL/10	WL/12	WL/8	WL/10	WL/12
10-0	241	301	362	293	366	440	360	450	540	418	523	628	495	620	...	565	...	...
11-0	199	249	300	243	304	364	298	372	446	346	432	518	409	510	613	467	585	...
12-0	167	209	251	204	255	306	250	312	375	290	363	436	344	430	517	394	492	...
13-0	143	178	214	173	216	260	213	266	320	248	310	372	294	366	440	336	420	505
14-0	123	154	184	149	187	224	183	229	275	213	267	320	253	316	380	290	362	435
15-0	107	134	161	130	163	195	160	200	240	186	232	279	220	276	331	252	315	380
16-0	94	118	141	115	143	172	140	176	211	163	204	245	194	242	291	222	277	333
17-0	84	104	125	101	127	152	124	156	187	145	181	217	171	215	258	197	245	295
18-0	74	93	112	91	113	136	111	139	167	129	161	194	153	191	230	175	219	263
19-0	67	84	100	81	102	122	100	125	150	116	145	174	137	172	206	157	196	236
20-0	60	75	91	75	92	110	90	112	135	105	131	157	124	155	186	142	177	213
21-0	...	68	82	67	83	100	82	102	122	95	119	143	112	141	169	129	161	194
22-0	...	62	75	61	76	91	75	93	112	87	108	130	102	128	154	117	146	176
23-0	...	57	69	55	69	83	68	85	102	79	99	119	94	117	141	107	134	161
24-0	...	...	63	51	64	77	63	78	94	73	91	109	86	108	129	99	123	148
25-0	...	...	58	...	58	76	58	72	87	67	84	100	80	100	119	91	114	136
26-0	...	...	...	...	...	65	...	67	80	62	77	93	73	92	110	84	105	126
27-0	...	...	...	...	...	60	...	62	74	58	72	86	68	85	102	78	98	117
28-0	...	...	...	...	...	56	...	58	69	...	67	80	63	79	95	73	91	109
29-0	...	...	...	...	...	...	...	...	64	...	62	75	...	74	89	68	84	101
30-0	...	...	...	...	...	...	...	...	60	...	58	70	...	69	83	63	79	95

Figures above Heavy Lines are Loads for which Unit Shear is over 60 lbs. per Square Inch.

10″ Milcor Steel Domes + 2″ Concrete

Safe Total Load Uniformly Distributed per Square Foot. 5″ Joists — 25″ O. C.

Weight per Square Foot of Slab Area = 56.3 Lbs.
Concrete per Square Foot of Slab Area = .376 Cubic Feet.
Shear Area = 64.5 Square Inches.
Core Area of Section = 62.4 Per Cent.

fs = 18000 Lbs. per Sq. In. fc = 700 Lbs. per Sq. In.
FOR STRESSES OF—
fs = 16,000 Lbs. per Square Inch, and
fc = 650 Lbs. per Square Inch, — USE 8/9 of values below.

Area of Steel	.614 Square Inch			.75 Square Inch			.88 Square Inch			1.04 Square Inch			1.20 Square Inch			1.38 Square Inch		
Bars { Str. Bent	1-⅝″ Round 1-⅝″ Round			1-⅝″ Round 1-¾″ Round			1-¾″ Round 1-¾″ Round			1-¾″ Round 1-⅞″ Round			1-⅞″ Round 1-⅞″ Round			1-⅞″ Round 1-1″ Round		
Span	WL/8	WL/10	WL/12	WL/8	WL/10	WL/12	WL/8	WL/10	WL/12	WL/8	WL/10	WL/12	WL/8	WL/10	WL/12	WL/8	WL/10	WL/12
10-0	345	430	518	417	520	625	486	608	730	570	712	855	655	820	...	...	...	...
11-0	285	355	428	344	430	517	402	503	603	471	590	707	544	679	...	623	780	...
12-0	240	300	359	289	360	435	338	423	506	398	497	596	458	572	688	525	655	...
13-0	204	254	306	246	308	370	288	360	432	340	423	510	390	488	585	446	558	670
14-0	176	220	264	212	265	319	248	310	372	292	366	438	338	420	505	388	485	579
15-0	153	191	230	185	231	278	216	270	324	255	318	382	294	366	440	338	423	506
16-0	135	168	202	163	203	244	190	238	286	224	280	336	258	322	386	297	370	445
17-0	119	149	179	144	180	216	168	210	252	198	248	297	228	285	342	264	328	394
18-0	106	133	160	129	160	193	150	188	225	177	221	265	204	254	305	235	293	352
19-0	95	119	143	115	144	173	135	169	202	159	198	238	183	228	274	210	263	316
20-0	86	107	129	104	130	156	122	152	182	144	179	215	165	206	247	190	237	285
21-0	78	98	118	95	118	142	110	138	165	130	162	195	150	187	224	173	215	258
22-0	71	89	107	86	107	129	100	126	151	118	148	178	136	170	204	157	196	236
23-0	65	81	98	79	98	118	92	115	138	108	135	162	125	156	187	144	180	215
24-0	...	75	90	73	91	109	85	106	127	100	124	149	114	143	172	132	165	198
25-0	...	69	83	67	83	100	78	98	117	92	114	137	106	132	158	122	153	183
26-0	...	...	77	...	78	93	72	90	108	85	106	127	97	122	146	113	141	169
27-0	...	...	71	...	72	86	67	83	100	79	98	118	91	113	136	104	130	156
28-0	...	...	66	...	66	80	...	78	93	73	92	110	84	105	126	97	121	145
29-0	...	...	...	...	...	75	...	73	87	68	85	102	79	98	118	91	113	136
30-0	...	...	...	...	...	70	...	68	81	...	80	96	74	92	110	85	106	127

Figures above Heavy Lines are Loads for which Unit Shear is over 60 lbs. per Square Inch.

10″ Milcor Steel Domes + 2½″ Concrete

Safe Total Load Uniformly Distributed per Square Foot. 5″ Joists — 25″ O. C.

Weight per Square Foot of Slab Area = 62.3 Lbs.
Concrete per Square Foot of Slab Area = .417 Cubic Feet.
Shear Area = 67.5 Square Inches.
Core Area of Section = 60.0 Per Cent.

fs = 18000 Lbs. per Sq. In. fc = 700 Lbs. per Sq. In.
FOR STRESSES OF—
fs = 16,000 Lbs. per Square Inch, and
fc = 650 Lbs. per Square Inch, — USE 8/9 of values below.

Area of Steel	.614 Square Inch			.75 Square Inch			.88 Square Inch			1.04 Square Inch			1.20 Square Inch			1.38 Square Inch		
Bars { Str. Bent	1-⅝″ Round 1-⅝″ Round			1-⅝″ Round 1-¾″ Round			1-¾″ Round 1-¾″ Round			1-¾″ Round 1-⅞″ Round			1-⅞″ Round 1-⅞″ Round			1-⅞″ Round 1-1″ Round		
Span	WL/8	WL/10	WL/12	WL/8	WL/10	WL/12	WL/8	WL/10	WL/12	WL/8	WL/10	WL/12	WL/8	WL/10	WL/12	WL/8	WL/10	WL/12
10-0	361	451	542	436	545	655	510	637	765	600	750	900	687	862	...	795	...	...
11-0	298	373	447	360	450	540	422	525	632	495	620	745	570	712	...	657	815	...
12-0	251	313	376	303	378	455	354	442	530	417	521	625	476	595	715	552	688	...
13-0	214	266	320	258	322	387	301	376	452	355	443	533	408	510	612	470	585	705
14-0	184	230	276	222	278	334	260	325	390	306	382	458	352	440	528	405	505	606
15-0	160	200	241	194	242	291	226	283	340	266	333	400	306	383	460	353	440	530
16-0	141	176	211	170	213	256	199	249	299	234	292	352	269	337	405	310	387	465
17-0	125	156	188	151	188	226	176	220	264	208	259	312	238	298	358	275	343	412
18-0	111	139	167	135	168	202	157	197	236	185	231	278	213	266	320	245	306	368
19-0	100	125	150	121	151	181	141	177	212	166	208	249	191	238	287	220	275	330
20-0	90	113	135	109	136	163	128	159	191	150	187	225	172	215	259	198	248	298
21-0	82	102	123	99	124	148	115	144	173	136	170	204	156	196	235	180	224	270
22-0	75	93	112	91	113	135	105	132	158	124	155	186	142	178	214	164	205	246
23-0	68	86	102	83	103	124	97	121	144	113	142	170	130	163	196	150	187	224
24-0	...	79	94	76	95	114	89	111	133	104	130	156	120	150	180	138	172	206
25-0	...	72	87	70	87	105	82	102	122	96	120	144	100	138	166	127	159	190
26-0	...	67	80	...	81	97	76	95	113	89	111	133	102	128	153	118	147	176
27-0	...	...	75	...	75	90	70	88	105	83	103	124	95	118	142	109	136	163
28-0	...	...	69	...	70	84	...	82	98	77	96	115	88	110	132	101	126	152
29-0	...	...	...	...	...	78	...	76	91	72	89	107	82	102	123	95	118	141
30-0	...	...	...	...	...	73	...	71	85	...	84	100	77	96	115	88	110	132

Figures above Heavy Lines are Loads for which Unit Shear is over 60 lbs. per Square Inch.

12″ Milcor Steel Domes + 2″ Concrete

Safe Total Load Uniformly Distributed per Square Foot. 5″ Joists — 25″ O. C.

Weight per Square Foot of Slab Area = 62.0 Lbs.
Concrete per Square Foot of Slab Area = .414 Cubic Feet.
Shear Area = 75.0 Square Inches.
Core Area of Section = 64.6 Per Cent.

fs = 18000 Lbs. per Sq. In. fc = 700 Lbs. per Sq. In.
FOR STRESSES OF —
fs = 16,000 Lbs. per Square Inch, and
fc = 650 Lbs. per Square Inch, — USE 8/9 of values below.

Area of Steel	.88 Square Inch			1.04 Square Inch			1.20 Square Inch			1.38 Square Inch			1.57 Square Inch		
Bars { Straight Bent	1-¾″ Round 1-¾″ Round			1-¾″ Round 1-⅞″ Round			1-⅞″ Round 1-⅞″ Round			1-⅞″ Round 1-1″ Round			1-1″ Round 1-1″ Round		
Span	WL/8	WL/10	WL/12	WL/8	WL/10	WL/12	WL/8	WL/10	WL/12	WL/8	WL/10	WL/12	WL/8	WL/10	WL/12
12-0	400	500	598	472	590	708	545	680	815	625	780	...	700	875	...
13-0	340	425	510	403	503	603	463	580	695	533	665	800	600	745	...
14-0	292	366	440	346	433	520	400	500	600	460	575	690	515	644	...
15-0	255	319	383	302	378	453	348	435	522	400	500	600	450	560	675
16-0	224	280	337	266	332	398	306	382	458	352	440	528	395	492	592
17-0	198	248	298	233	294	350	271	338	406	310	390	467	350	435	525
18-0	177	222	266	210	262	313	242	302	362	278	347	417	312	389	468
19-0	159	199	238	188	235	282	217	271	325	249	312	374	280	350	420
20-0	144	180	215	170	212	255	196	244	294	224	281	337	253	315	380
21-0	130	163	195	154	192	231	178	222	266	204	255	306	229	286	344
22-0	119	148	178	140	175	211	162	202	242	186	232	279	209	260	313
23-0	109	136	163	129	160	193	148	185	222	170	212	255	191	238	286
24-0	100	124	149	118	148	177	136	170	204	156	195	234	175	219	263
25-0	92	115	138	109	136	163	125	157	188	144	180	216	162	202	242
26-0	85	106	127	101	126	151	116	145	174	133	166	200	150	186	224
27-0	79	99	118	94	117	140	107	134	161	123	154	186	139	173	208
28-0	73	92	110	87	108	130	100	125	150	115	144	172	129	161	193
29-0	68	85	102	81	101	121	93	116	139	107	134	160	120	150	180
30-0	...	80	96	75	94	113	87	109	130	100	125	150	112	140	168
31-0	...	75	90	71	88	106	81	102	122	94	117	140	105	131	157
32-0	...	70	84	...	83	99	76	95	114	88	110	132	98	123	148
33-0	...	...	79	...	78	94	72	90	108	83	103	124	93	116	139
34-0	...	...	74	...	73	88	68	85	102	78	97	117	88	109	131
35-0	...	...	70	...	69	83	...	80	96	73	92	110	82	103	124

Figures above Heavy Lines are Loads for which Unit Shear is over 60 lbs. per Square Inch.

12″ Milcor Steel Domes + 2½″ Concrete

Safe Total Load Uniformly Distributed per Square Foot. 5″ Joists — 25″ O. C.

Weight per Square Foot of Slab Area = 68.0 Lbs.
Concrete per Square Foot of Slab Area = .455 Cubic Feet.
Shear Area = 78.5 Square Inches.
Core Area of Section = 62.5 Per Cent.

fs = 18000 Lbs. per Sq. In. fc = 700 Lbs. per Sq. In.
FOR STRESSES OF —
fs = 16,000 Lbs. per Square Inch, and
fc = 650 Lbs. per Square Inch, — USE 8/9 of values below.

Area of Steel	.88 Square Inch			1.04 Square Inch			1.20 Square Inch			1.38 Square Inch			1.57 Square Inch		
Bars { Straight Bent	1-¾″ Round 1-¾″ Round			1-¾″ Round 1-⅞″ Round			1-⅞″ Round 1-⅞″ Round			1-⅞″ Round 1-1″ Round			1-1″ Round 1-1″ Round		
Span	WL/8	WL/10	WL/12	WL/8	WL/10	WL/12	WL/8	WL/10	WL/12	WL/8	WL/10	WL/12	WL/8	WL/10	WL/12
12-0	415	518	620	490	612	735	562	705	843	645	810	...	730	910	...
13-0	352	441	530	417	522	625	478	600	718	550	690	825	620	778	...
14-0	304	380	456	360	450	540	413	517	620	475	595	715	535	670	805
15-0	265	331	397	313	392	470	360	450	540	415	520	622	465	585	700
16-0	233	291	349	276	345	413	316	396	475	364	455	545	410	513	615
17-0	206	258	309	244	305	366	280	350	420	322	405	484	364	455	545
18-0	184	230	276	218	272	327	250	312	375	288	360	432	324	405	485
19-0	165	206	248	196	244	294	224	280	336	258	323	388	290	364	435
20-0	149	186	224	177	220	265	202	253	304	233	291	350	262	328	395
21-0	135	169	202	160	200	240	183	229	275	211	265	317	238	298	358
22-0	123	154	185	146	182	219	167	209	251	192	241	289	216	272	325
23-0	113	141	169	133	167	200	153	192	229	176	221	265	198	248	298
24-0	103	129	155	122	153	184	140	176	211	162	202	242	182	228	273
25-0	95	119	143	113	141	170	129	162	194	149	186	224	168	210	252
26-0	88	110	132	104	130	157	120	150	180	138	173	207	155	195	233
27-0	82	102	123	97	121	145	111	139	167	128	160	192	144	180	216
28-0	76	95	114	90	112	135	103	129	155	119	149	178	134	168	201
29-0	...	89	106	84	105	126	96	120	144	111	139	166	125	156	187
30-0	...	83	99	78	98	118	90	112	135	103	130	155	117	146	175
31-0	...	78	93	73	92	110	84	105	126	97	121	145	109	137	164
32-0	...	73	87	...	86	103	79	99	118	91	114	136	102	128	153
33-0	...	...	82	...	81	97	74	93	111	85	107	128	96	121	145
34-0	...	...	77	...	76	92	...	87	105	80	101	121	91	114	136
35-0	...	...	...	...	...	87	...	83	99	76	95	114	85	107	128

Figures above Heavy Lines are Loads for which Unit Shear is over 60 lbs. per Square Inch.

14″ Milcor Steel Domes + 2½″ Concrete

Safe Total Load Uniformly Distributed per Square Foot. 5″ Joists — 25″ O. C.

Weight per Square Foot of Slab Area = 78.4 Lbs.
Concrete per Square Foot of Slab Area = .523 Cubic Feet.
Shear Area = 104.0 Square Inches
Core Area of Section = 61.9 Per Cent.

fs = 18000 Lbs. per Sq. In. fc = 700 Lbs. per Sq. In.
FOR STRESSES OF —
fs = 16,000 Lbs. per Square Inch, and
fc = 650 Lbs. per Square Inch, — USE 8/9 of values below.

Area of Steel	.88 Square Inch			1.04 Square Inch			1.20 Square Inch			1.38 Square Inch			1.57 Square Inch		
Bars { Straight Bent	1-¾″ Round 1-¾″ Round			1-¾″ Round 1-⅞″ Round			1-⅞″ Round 1-⅞″ Round			1-⅞″ Round 1-1″ Round			1-1″ Round 1-1″ Round		
Span	WL/8	WL/10	WL/12	WL/8	WL/10	WL/12	WL/8	WL/10	WL/12	WL/8	WL/10	WL/12	WL/8	WL/10	WL/12
15-0	305	380	458	360	451	540	415	518	622	475	595	715	535	670	805
16-0	268	335	403	318	394	474	364	455	545	418	523	626	472	590	707
17-0	238	296	357	280	350	420	322	404	483	372	464	555	417	522	625
18-0	212	264	318	250	314	375	288	360	430	332	414	495	372	465	558
19-0	190	238	285	225	281	336	258	323	386	297	371	445	335	417	502
20-0	171	214	257	202	254	305	233	292	350	268	335	402	302	377	453
21-0	155	194	233	184	230	275	211	264	318	244	304	365	274	342	410
22-0	142	177	212	168	210	252	192	241	289	222	277	333	249	311	374
23-0	130	162	195	154	192	279	176	219	263	201	253	303	228	285	342
24-0	119	148	179	141	176	212	162	202	243	186	234	280	209	261	314
25-0	110	137	165	130	163	195	149	187	224	172	217	258	193	241	290
26-0	101	127	152	120	150	180	138	172	207	159	198	238	178	223	268
27-0	94	118	141	111	140	167	128	160	192	147	184	221	165	207	248
28-0	88	109	131	104	130	155	119	149	178	137	171	205	154	192	231
29-0	...	102	122	96	121	145	111	138	166	127	159	192	143	179	215
30-0	...	95	114	90	113	135	103	129	155	119	149	179	134	167	201
31-0	...	89	107	...	105	127	97	121	145	111	139	167	125	156	188
32-0	...	...	100	...	99	119	91	114	137	105	131	157	119	147	178
33-0	...	...	94	...	93	112	85	107	128	98	123	148	110	138	166
34-0	...	...	89	...	88	105	...	101	121	93	116	139	104	130	157
35-0	...	...	84	...	...	100	...	95	114	87	109	131	98	123	148
36-0	...	...	...	...	...	94	...	90	108	...	103	124	93	116	140
37-0	...	...	...	...	...	89	...	85	102	...	98	117	88	110	132
38-0	...	...	...	...	...	...	...	...	97	...	93	111	...	104	126
39-0	...	...	...	...	...	...	...	...	92	...	88	105	...	99	119
40-0	...	...	...	...	...	...	...	...	87	...	...	100	...	94	113

Figures above Heavy Lines are Loads for which Unit Shear is over 60 lbs. per Square Inch.

14″ Milcor Steel Domes + 3″ Concrete

Safe Total Load Uniformly Distributed per Square Foot. 5″ Joists — 25″ O. C.

Weight per Square Foot of Slab Area = 84.8 Lbs.
Concrete per Square Foot of Slab Area = .565 Cubic Feet.
Shear Area = 108.0 Square Inches.
Core Area of Section = 60.0 Per Cent.

fs = 18000 Lbs. per Sq. In. fc = 700 Lbs. per Sq. In.
FOR STRESSES OF —
fs = 16,000 Lbs. per Square Inch, and
fc = 650 Lbs. per Square Inch, — USE 8/9 of values below.

Area of Steel	1.20 Square Inch			1.38 Square Inch			1.57 Square Inch			1.78 Square Inch			2.00 Square Inch		
Bars { Straight Bent	1-⅞″ Round 1-⅞″ Round			1-1″ Round 1-⅞″ Round			1-1″ Round 1-1″ Round			1-1″ Square 1-1″ Round			1-1″ Square 1-1″ Square		
Span	WL/8	WL/10	WL/12	WL/8	WL/10	WL/12	WL/8	WL/10	WL/12	WL/8	WL/10	WL/12	WL/8	WL/10	WL/12
15-0	425	534	640	493	615	738	555	693	835	635	793	950	700	885	...
16-0	374	470	562	433	540	650	488	610	733	558	697	835	625	782	935
17-0	332	415	498	383	480	575	432	540	650	493	617	738	554	692	830
18-0	296	370	445	341	427	512	385	484	580	442	550	660	494	617	740
19-0	266	332	400	307	385	460	345	433	520	394	492	590	443	553	663
20-0	240	300	360	277	346	415	312	392	470	357	445	533	400	500	600
21-0	217	272	327	251	314	376	283	354	425	322	403	483	362	451	541
22-0	198	248	298	229	286	343	258	322	388	295	368	442	330	413	495
23-0	181	227	272	209	262	314	235	295	354	270	337	403	301	376	452
24-0	166	208	250	192	240	288	216	270	325	248	310	372	277	347	415
25-0	153	192	230	177	222	265	199	250	299	228	285	342	256	320	384
26-0	142	177	213	163	205	245	184	230	277	211	264	317	236	296	355
27-0	132	165	198	152	190	228	171	214	257	196	245	294	220	276	330
28-0	122	153	184	141	176	212	159	199	238	182	228	274	204	255	306
29-0	114	142	171	131	165	197	148	185	222	169	212	254	192	240	288
30-0	106	133	160	123	153	184	138	173	208	159	198	238	178	222	267
31-0	100	125	150	115	144	172	130	162	194	148	185	223	166	208	250
32-0	93	117	141	108	135	162	123	152	184	139	176	208	156	195	234
33-0	...	110	132	101	127	152	114	143	172	131	162	196	146	183	220
34-0	...	104	125	96	120	143	108	134	162	123	154	185	138	173	208
35-0	...	98	117	...	113	135	102	127	154	116	145	175	130	163	196
36-0	...	93	111	...	107	128	96	120	144	110	137	165	123	154	185
37-0	...	...	105	...	101	121	...	114	136	104	130	156	117	146	175
38-0	...	...	100	...	95	115	...	107	129	99	123	148	111	138	166
39-0	...	...	94	...	...	109	...	102	123	94	117	140	105	131	157
40-0	...	...	...	...	...	104	...	98	117	...	111	134	100	125	150

Figures above Heavy Lines are Loads for which Unit Shear is over 60 lbs. per Square Inch.

THE NEW STRAUS BUILDING
S. W. STRAUS & CO., OWNERS

GRAHAM, ANDERSON,
PROBST & WHITE
ARCHITECTS, CHICAGO

McNULTY BROTHERS COMPANY
PLASTERING CONTRACTORS
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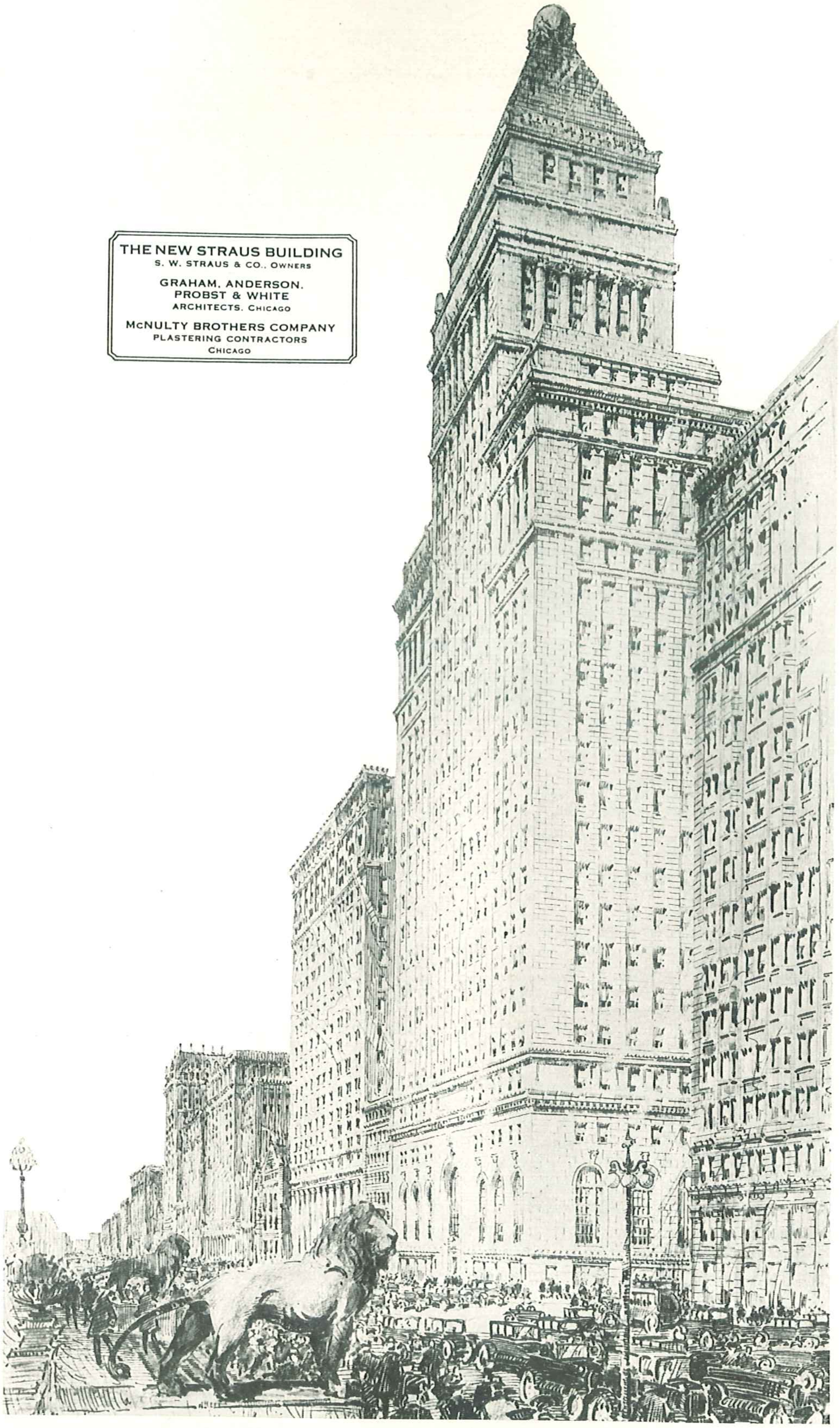


75,000 Feet of Milcor Expansion Corner Bead Used in this Building.

Approved Architects' Specifications for Milcor Metal Lath Construction

ANY specification followed from these pages will insure safe and permanent construction at an economical cost. The following terms for Milcor Metal Lath Construction have been established:

STAY-RIB LATH No. 1: A Milcor Metal Lath in which the rib has a total depth of ⅛ inch.

⅜ STAY RIB LATH No. 2: A combination of expanded metal lath and ribs where the rib has a total depth of ⅜ inch.

NETMESH METAL LATH: This term is used to indicate a metal lath, slit and expanded from sheet metal into such form that there will be no rib in the lath.

NETMESH CORRUGATED SELF-FURRING LATH: An expanded Milcor lath so formed that portions of it extend from the face of the lath so that it is separated at least ¼ inch from the background to which it is attached.

ATTACHED CEILING: A ceiling which is clipped directly to or suspended less than 6 inches below the construction above.

SUSPENDED CEILING: A ceiling which is suspended more than 6 inches below the construction above.

HANGER: The vertical member of a suspended ceiling which carries the steel framework.

RUNNING CHANNEL: The heaviest horizontal member of a suspended ceiling.

FURRING CHANNEL: The smallest horizontal member of a suspended ceiling — the member to which the lath is attached.

APPROVED SPECIFICATIONS:

No. 1 — Milcor Metal Lath on Wood Stud and Joist Construction

1. WEIGHTS OF MILCOR METAL LATH.

a. For Partitions:

Milcor Netmesh Metal Lath, for studs with a maximum spacing of 16 inches on centers, shall weigh not less than 2.35 pounds per square yard.

Milcor ⅜ Stay-Rib Lath No. 2, for studs with a maximum spacing of 19½ inches and 24 inches on centers, shall weigh not less than 2.75 pounds and 3 pounds per square yard, respectively.

Milcor Stay-Rib Lath No. 1, for studs with a maximum spacing of 19½ inches on centers, shall weigh not less than 2.75 pounds per square yard.

b. For Ceilings:

Milcor Netmesh Metal Lath, for joists with a maximum spacing of 16 inches on centers, shall weigh not less than 3 pounds per square yard.

Milcor ⅜ Stay-Rib Lath No. 2, for joists with a maximum spacing of 16 inches and 24 inches on centers, shall weigh not less than 2.75 and 3.50 pounds per square yard, respectively.

Milcor Stay-Rib Lath No. 1, for joists with a maximum spacing of 19½ inches on centers, shall weigh not less than 2.75 pounds per square yard.

2. SIZE, WEIGHTS AND SPACING OF NAILS, STAPLES AND TIE WIRE.

a. Attachments for Metal Lath:

Milcor Metal Lath shall be attached to wood studs and joists by nails not less than 6d or by 1¼-inch No. 14 gauge wire staples driven to a penetration of not less than ⅞ inch and spaced not to exceed 6 inches on center; provided, further, that ¾-inch No. 14 gauge wire staples may be used in lieu of 1¼-inch staples when Underwriters' Standards are not exacted.

b. Tie Wire shall be not less than No. 18 gauge galvanized, soft annealed.

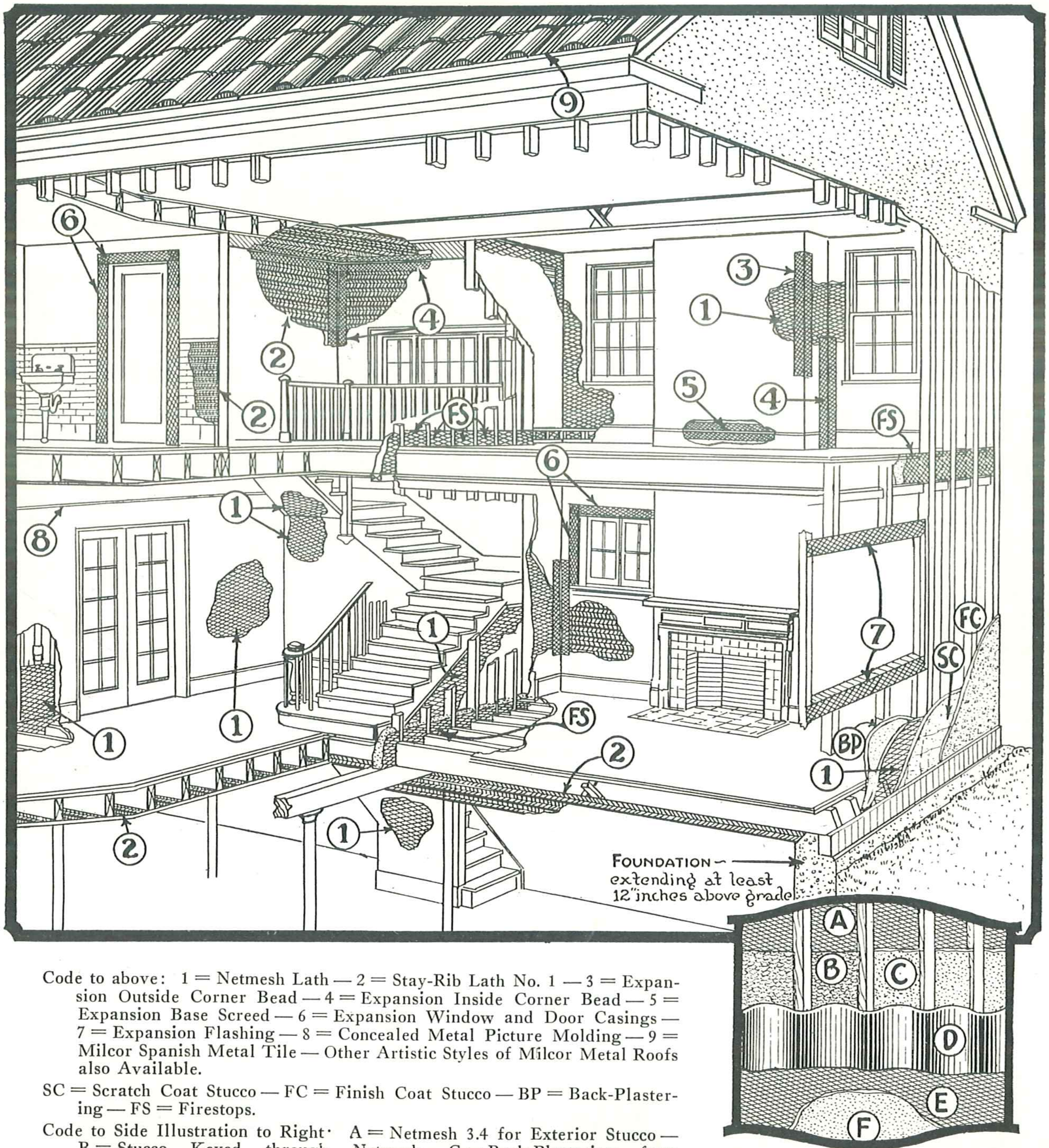
3. ERECTION OF MILCOR METAL LATH.

a. All Milcor Metal Lath shall be erected with the long dimensions of sheets across the supports; Stay-Rib Lath with the ribs against the supports.

b. Milcor Lath shall be applied first to the ceilings and the sheets shall be carried down 6 inches on to the walls and partitions. If metal lath is not used on the ceilings, the lathing may start at the top of the wall and be bent and carried up 6 inches on to the ceiling joists so that no joints occur at juncture of ceiling and walls; and on walls, all lath shall be started one stud away from corner and be bent into the corner and carried on to the abutting wall so as to avoid a joint at juncture of walls; provided, however, that where ⅜ Stay-Rib Lath No. 2 is used on ceilings or walls, it shall be butted into all joints and strips of flat lath not less than 12 inches wide shall be bent into the shape of an "L," 6 inches on each side, and be securely wired along each edge in all corners. These strips — or preferably, Milcor Expansion Corner Bead — shall not be fastened at the corner, but only along the two outer edges.

(Continued on page 56.)

Back-Plastered Stucco and Fire-proof Construction



Code to above: 1 = Netmesh Lath — 2 = Stay-Rib Lath No. 1 — 3 = Expansion Outside Corner Bead — 4 = Expansion Inside Corner Bead — 5 = Expansion Base Screed — 6 = Expansion Window and Door Casings — 7 = Expansion Flashing — 8 = Concealed Metal Picture Molding — 9 = Milcor Spanish Metal Tile — Other Artistic Styles of Milcor Metal Roofs also Available.

SC = Scratch Coat Stucco — FC = Finish Coat Stucco — BP = Back-Plastering — FS = Firestops.

Code to Side Illustration to Right· A = Netmesh 3.4 for Exterior Stucco — B = Stucco Keyed through Netmesh — C = Back-Plastering from Inside — D = Building Paper or Other Insulation — E = Netmesh 2.35 for Inside Walls — F = Inside Plastered Wall over Netmesh.

(Continued from page 54.)

c. Milcor Lath shall be placed so that the lower sheet laps over the upper — not vice versa — and shall be securely attached to the supports. Nails or staples shall be so placed that a nail or staple occurs where sides of sheets lap at supports. On walls, clinch of nails shall be upward, not downward.

d. Milcor Netmesh Metal Lath shall be lapped at sides not less than ½ inch, and at ends not less than 1 inch. End laps shall occur only over supports.

e. Milcor Stay-Rib Lath shall be lapped at sides by nesting outside ribs, and at ends, 1 inch.

NOTE: *Corner Reinforcement:*

Wherever wood lath — or plaster board — is used, Milcor Expansion Corner Bead shall be applied in all vertical corners and into corners between ceilings and partitions and lightly attached over the wood lath or plaster board, to reinforce the plaster and prevent corner cracks. See pages 2, 24, 25 and 55.

NOTE: See also page 63 for Milcor Metal Lath Alternate Specifications for limited expenditures.

No. 2 — Back-Plastered Milcor Metal Lath Stucco Construction

1. WEIGHTS OF MILCOR METAL LATH.

Milcor Corrugated Netmesh Expanded Metal Lath, self-furring, or ⅜ Stay-Rib Lath No. 2, for studs spaced not greater than 16 inches on centers, shall weigh not less than 3.4 pounds per square yard.

2. FURRING STRIPS.

Furring strips, if used, shall be Milcor Crimped Furring, not less than 1 inch wide and not less than No. 22 gauge.

3. SIZES AND WEIGHTS OF NAILS, STAPLES AND TIE WIRE.

a. Milcor Metal Lath shall be attached to supports by not less than 6d nails or 1¼-inch No. 14 gauge galvanized wire staples driven to a penetration of not less than ⅞ inch. Attachments used for Netmesh Metal Lath shall be spaced not to exceed 6 inches on center and when used for ⅜ Stay-Rib Lath No. 2 shall occur at each rib.

b. Tie wire shall be not less than No. 18 gauge galvanized, soft annealed.

4. SIZE, SPACING AND FRAMING OF WOOD EXTERIOR.

a. Studs:

Studs shall be not less than 2 by 4 inches, spaced not to exceed 16 inches on centers, and shall rest on a plate bolted to masonry not less than 9 inches above finished grade.

b. Horizontal Bracing:

Studs shall be braced midway between story heights with horizontal bridging not less than 2 inches in thickness, set back or tilted to permit back-plastering.

c. Diagonal Bracing:

Wood studding shall be braced at each corner of building at each floor and wherever else required for good construction, by braces not less than 1 by 4 inches, the slope or angle of which shall be such that each brace shall tie together not less than the upper or lower half of the three studs adjacent to the corners or other places requiring bracing, at floor or ceiling levels. Such braces shall be cut into and nailed to each stud with not less than two 10d nails; or an alternate form of diagonal bracing consisting of 2-inch material cut between and nailed to the studs in the positions described shall be used.

d. Other Bracing, Etc.:

Wall studs shall be tied together at floors and ceilings by grits or plates cut into or otherwise secured to each stud at such points. Studs shall be doubled around openings and openings 4 feet wide or more shall be trussed over.

5. INSULATION.

Not less than one layer of building paper, quilting, felt, or other form of insulation shall be imposed as insulation between the interior and exterior face of studs.

6. FIRESTOPPING.

The space between the studs at their juncture with the floor and ceiling joists shall be properly firestopped. Firestops shall consist of Milcor Netmesh Metal Lath, basket-shaped, to fit between studs, coated with plaster or cement and filled with incombustible materials to 3 inches above floor level.

7. FLASHING.

Milcor No. 7 Expansion Flashing shall be used at water tables, over all door and window openings, wherever projecting wood trim occurs, and at all horizontal courses and elsewhere, wherever water might remain on or get behind stucco. (Refer to page 30.)

8. STUCCO MATERIALS.

Stucco shall be of approved materials and shall be at least two coats — not including back-plastering — and have a thickness not less than ⅞ inch over outside face of lath, and a total thickness of not less than 2 inches, including back-plastering.

9. ERECTION OF MILCOR METAL LATH.

a. Milcor Metal Lath shall not be applied until all exterior framing is completed and flashing nailed in place.

b. All lath shall be erected with the long dimension of sheet across supports; Stay-Rib or Corrugated Netmesh Self-Furring Lath with the ribs against supports.

c. Application of sheets of Milcor lath shall commence at the top right corner of building, one stud away from corner, bending sheets around the angle and carrying them on to the abutting wall, so that no joints shall occur at corners; provided, however, that where Corrugated Netmesh Self-Furring or ⅜ Stay-Rib Lath No. 2 is used, it shall be started at the corner and strips of flat lath not less than 12 inches wide shall be bent around the angle, not less than 6 inches on each wall, and shall be securely wired along each edge to the Stay-Rib or Corrugated Netmesh Self-Furring Lath. These strips shall not be fastened at the corner, but only along the two outer edges. Milcor Expansion Corner Bead cut from pure Zinc or Copper is especially recommended on stucco corners. (Refer to pages 24, 25 and 55.)

d. Lath shall be placed so that the lower sheet laps over the upper — not vice versa — and shall be securely attached to the supports. Nails or staples shall be so placed that a nail or staple occurs where sides of sheets lap at supports. On walls, clinch of nails shall be upward, not downward.

e. If Regular Netmesh Expanded Metal Lath — not Corrugated — is used, furring strips may be nailed at the same time as lath; the nails or staples shall be bent over or straddle the furring strips.

f. Netmesh Expanded Metal Lath shall be lapped at sides not less than ½ inch, and at ends not less than 1 inch. Stay-Rib lath shall be lapped at sides by nesting outside ribs, and at ends, 1 inch. End laps shall occur only over supports.

g. Side laps shall be tied at least once between supports with No. 18 gauge galvanized annealed wire.

h. Where required, Netmesh Metal Lath baskets for firestops shall be constructed before applying stucco.

10. APPLICATION OF STUCCO.

a. Scratch coat shall first be applied to exterior face of lath, and shall average at least ¼ inch in thickness over face of lath to provide proper support for succeeding coats. After it has set, the back-plastered coat shall be applied, working the mortar well between the lath and face of stud, and thoroughly embedding back face of lath by not less than ⅝-inch of stucco plaster.

b. Where two-coat stucco is used, second or finish coat shall be applied on exterior face of wall directly on scratch coat. Where three-coat stucco is used, a brown or straightening coat shall first be applied over scratch coat and shall be well scratched to receive finishing coat. Total thickness of stucco shall not be less than specified in paragraph 8 preceding.

c. Portland cement stucco shall not be applied in freezing weather except when suitably protected from freezing. Other stuccoes shall be applied only in accordance with recommendations of manufacturers thereof.

11. APPLICATION OF INSULATION.

Before lathing interior face of studs, insulation as specified in paragraph 5 above, shall be applied between or over interior face of studs, so as to provide an air space between it and the back side of interior plaster.

No. 3 — Stucco on Milcor Metal Lath over Sheathing

Use Specifications No. 2, Back-Plastered Metal Lath Stucco Construction, excepting where modified hereunder.

1. WEIGHTS OF MILCOR METAL LATH.— Same as Specifications No. 2.

2. FURRING STRIPS. — Same as Specifications No. 2.

3. SIZE AND WEIGHTS OF NAILS, STAPLES AND TIE WIRE. — Same as Specifications No. 2.

4. SIZE, SPACING AND FRAMING OF WOOD EXTERIOR.

a. Studs. — Same as Specifications No. 2 — Back-Plastered Construction.

b. Horizontal Bracing:

Studs shall be braced midway between story heights with horizontal bridging of the same size as the studs.

c. Diagonal Bracing. — Same as Specifications 2.

d. Other Bracing. — Same as Specifications No. 2.

e. Sheathing:

Sheathing shall be not less than ⅞ inch nominal thickness, not less than 6 inches nor more than 8 inches wide, and shall be laid horizontally with two 10d nails driven into each stud. — Diagonal sheathing is not recommended.

5. INSULATION.

A substantial water-proofed building paper, quilting, felt or other water-proof form of insulation shall be laid horizontally over the sheathing, commencing at the bottom. The bottom strip shall lap over the baseboard at the bottom of the wall, and upper strips shall lap over lower strips — not vice versa — and lap shall be not less than 2 inches. Insulations shall lap flashings at all openings.

6. FIRESTOPPING. — Same as Specifications No. 2.

7. FLASHING. — Same as Specifications No. 2.

8. STUCCO MATERIALS.

Stucco shall be of approved materials and shall be at least two-coat work and have a thickness of not less than ⅞ inch over outside face of lath.

9. ERECTION OF MILCOR METAL LATH.

a. Milcor Metal Lath shall not be applied until all exterior framing is completed and flashing and insulation nailed in place.

b, c, d. — Same as Specifications No. 2.

e. If Regular Netmesh Expanded Metal Lath — not Corrugated — is used, furring strips are nailed at the same time as lath, the strips being applied vertically on about 12-inch centers directly over insulation and nailed or stapled every 12 inches; the nails or staples shall be bent over or shall straddle the furring strips.

f, g. Same as Specifications No. 2.

h. Omit.

10. APPLICATION OF STUCCO.

a. Scratch coat shall be of such consistency and so manipulated as to thoroughly imbed back side of Milcor metal lath, shall average at least ¼ inch in thickness over face of lath and shall be well scratched to provide a bond for the succeeding coat.

b. Same as Specifications No. 2.

c. Same as Specifications No. 2.

11. CONSTRUCTION OF FIRESTOPPING.

Before lathing interior face of studs, construct Netmesh metal lath baskets for firestops to completely fill openings at position specified in paragraph 6, preceding coat with plaster or cement and fill with incombustible materials to 3 inches above floor level. Refer to page 55.

No. 4 — Overcoating Stucco on Milcor Metal Lath

Use Specifications No. 3, Stucco on Milcor Metal Lath Over Sheathing, excepting where modified hereunder.

1. Same as Specifications No. 3, Stucco over Sheathing.

2. Same as Specifications No. 3, Stucco over Sheathing.

3. Same as Specifications No. 3, Stucco over Sheathing.

4. RECONSTRUCTION OF OLD SIDING, ETC.

a. Renailing of Loose Siding, Shingles, etc.:

Where lap or beveled siding or shingles have been used for the wall covering, they shall be examined as to their present condition. If in good condition they may be left in place, but any loose siding or shingles shall be renailed and, if defective, shall be replaced, after which the procedure shall be as specified in article *b* below.

Removal of Siding Shingles, if in Poor Condition:

If siding or shingles are in generally poor condition, they shall be removed entirely and a substantial water-proofed building paper or membrane shall be applied over the sheathing, after which "Specification No. 3 for Stucco on Milcor Metal Lath Over Sheathing" shall be followed.

b. Extension of Door and Window Trim and Placing of Flashing:

After the old lap or bevel siding, or shingles, have been securely nailed to the sheathing, all door and window trim shall be extended so that it will have the proper projection beyond the finish face of the overcoating.

5. (Same as Specifications No. 3, except add "old siding or shingles" in front of word "sheathing."

6. Omit.

7. Same as stucco over sheathing.

8. Same as stucco over sheathing.

10. Same.

11. Omit.

No. 5 — Milcor Steel-Channel Stud Partitions (Solid or Hollow) for Fireproof Structures

1. WEIGHTS OF MILCOR METAL LATH.

a. Netmesh Expanded Metal Lath, for studs with a maximum spacing of 12 inches on center, shall weigh not less than 2.35 pounds per square yard and for studs with a maximum spacing of 16 inches on center shall weigh not less than 2.5 pounds per square yard.

b. ⅜ Stay-Rib Lath No. 2, for studs with a maximum spacing of 19½, 24, 30 and 36 inches on centers, shall weigh not less than 2.75, 3.5, and 4 pounds per square yard.

c. Stay-Rib Lath No. 1, for studs with a maximum spacing of 19½ inches on center, shall weigh not less than 2.75 pounds per square yard.

2. SIZE AND WEIGHT OF STUDS.

a. Studs for Solid Partitions shall be ¾-inch Milcor Cold Rolled Channels weighing not less than 276 pounds per thousand lineal feet.

b. Studs for Hollow Partitions shall be either a single row of Milcor Cold Rolled Channels of the width desired for the finished partition, or a double row of not less than ¾-inch Milcor Channels weighing not less than 276 pounds per thousand lineal feet.

3. SIZE AND WEIGHT OF RUNNER CHANNELS.

Floor and Ceiling Runner Channels for both solid and hollow partitions, if used, shall be not less than 1-inch Milcor Cold Rolled Channels weighing not less than 332 pounds per thousand lineal feet.

4. SPACERS, BRACES, TIE WIRE.

a. Spacers or Braces for hollow partitions shall be of substantial design and shall be spaced approximately 3 feet on centers.

b. Tie wire shall be not less than No. 18 gauge galvanized soft annealed.

5. ERECTION OF STUDDING.

a. When floor and ceiling runners are used, they shall be securely bolted or clamped to the floor beams, soffits of concrete or terra cotta arches and shall be secured substantially to top of concrete or tile floors. Hollow partitions shall have parallel lines of such floor and ceiling runners.

b. Studs shall be secured in position by bolting to floor and ceiling runners or by bending a shoe at the end of studs and wiring, nailing, or bolting to plates, or by inserting ends of studs in holes drilled in top of concrete or other masonry floors or punched in soffits of masonry ceilings, or by bending a shoe at ends of studs and anchoring to holes drilled in floors and ceilings, or, where Milcor metal lath ceilings are used, a small hole shall be made in the ceiling lath and the end of the Milcor Channel allowed to project through it and be wired to a runner channel attached to the ceiling lath.

c. Milcor Channels of a length shorter than the total height of the partition are permissible, but when pieced out with short lengths the splicing shall be made by lapping not less than 8 inches, with the flanges interlocked and securely wired together.

d. For hollow partitions the double studding shall be spaced to proper distance with spacers not over 3 feet centers.

6. ERECTION OF THE METAL LATH.

a. Milcor Metal Lath shall be applied to only one side of the channels, with the long dimension of sheet across the studs; ends of sheets shall be staggered one above another. Lathing shall commence at the top of the partitions and shall be carried down with the edge of the lower sheet lapping over the upper — not vice versa. If metal lath is not used on the ceiling, the lathing may be started at the top of the wall and be bent and carried up 6 inches on to the ceiling so that no joints occur at juncture of ceiling and walls; and on walls all lath shall be started one stud away from corner and be bent into the angle and carried on to the abutting wall so as to avoid a joint at juncture of walls; provided, however, that where ⅜ Stay-Rib Lath No. 2 is used on partitions, it shall be butted into all joints, and strips of Netmesh lath not less than 12 inches wide, shall be bent into the shape of an "L," not less than 6 inches on each side, and be securely wired along each edge in all corners. These strips shall not be fastened at the corner, but only along the two outer edges. Milcor Expansion Corner Bead is especially recommended for all corners. See pages 24, 25 and 55.

b. Sheets shall be wired to studs at intervals not exceeding 6 inches, and a tie shall occur where sides of sheets lap at channels. There shall be one tie on side laps half way between channels.

c. Netmesh Expanded Metal Lath shall be lapped at sides not less than ½ inch and at ends not less than 1 inch. End laps of sheets should generally occur only over studs; if between studs, sheets shall be securely laced with No. 18 gauge galvanized annealed wire.

d. Stay-Rib Lath shall be lapped at sides by nesting outside ribs, and at ends, 1 inch. End laps shall be as in preceding paragraph.

e. NOTE: Solid partitions over 6 feet high shall be temporarily braced horizontally on the channel side at intervals not exceeding 6 feet vertically, before applying plaster. Such bracing shall not be removed until scratch coat on the lath side of the partition has set.

No. 6 — Milcor Steel Channel Stud Partitions

(*For Non-Fireproof Structures with Wood Floors and Wood Joists*)

In buildings with wood floors or with wood floor joists, solid or hollow channel stud partitions shall be constructed in precisely the same manner as in buildings with incombustible floors or ceilings — see Specification No. 5 — except that when floor and ceiling runners are used they shall be spiked directly to the wood floor or the ceiling joists; provided, also, that alternate methods of securing the channels to the wood floors described as follows shall be permissible.

Channels may be secured to wood floors or to wood ceiling joists by driving two nails into the wood, one on either side of the web of the channel, leaving 1 inch of the nails undriven; or the end of the channel may be bent into a shoe and a nail driven through a hole punched in the shoe, into the floor or ceiling; or the channels may be set in shoes secured to the floor. For wood joist ceilings, if the joists are not in the proper location, short pieces of wood shall be cut in between them and the channels shall be either wired or nailed to such short pieces of wood.

No. 7 — Milcor Wall Furring

1. WEIGHTS OF MILCOR METAL LATH.

a. Netmesh Expanded Metal Lath, for vertical furring channels with a maximum spacing of 12 inches and 16 inches on centers, shall weigh not less than 2.35 pounds and 2.5 pounds per square yard, respectively.

b. ⅜ Stay-Rib Lath No. 2, for vertical furring channels with a maximum spacing of 19½, 24, 30 and 36 inches on centers, shall weigh not less than 2.75, 3.5, and 4 pounds per square yard.

c. Stay-Rib Lath No. 1 for vertical furring channels with a maximum spacing of 19½ inches on centers shall weigh not less than 2.75 pounds per square yard.

2. HORIZONTAL FURRING CHANNELS.

a. Minimum Size and Weight:

Milcor Horizontal Furring Channels shall be not less than ¾-inch Cold Rolled Channels, weighing not less than 276 pounds per thousand lineal feet.

b. Spacing.

Milcor Horizontal Furring Channel shall be spaced not to exceed 4 feet 6 inches on centers.

3. VERTICAL FURRING CHANNELS.

a. Minimum Size and Weight:

Milcor Vertical Furring Channels shall be not less than ¾-inch Cold Rolled Channels, weighing not less than 276 pounds per thousand lineal feet.

b. Spacing.

Milcor Vertical Furring Channels shall be spaced in accordance with the weight of the lath used, and shall not exceed 12-inch centers for 2.35 pound Netmesh Expanded Metal Lath, 16-inch centers for 2.5 pound Netmesh Expanded Metal Lath, not to exceed 19½, 24, 30 and 36 inches for ⅜ Stay-Rib Lath No. 2 weighing not less than 2.75, 3.5, and 4 pounds per square yard, and not greater than 19½ inches for Stay-Rib Lath No. 1.

4. TIE WIRE.

Tie Wire shall be not less than No. 18 gauge galvanized soft annealed.

5. ERECTION OF FURRING CHANNELS.

a. Milcor Horizontal Furring Channels shall be erected against the masonry walls and shall be laid flat with a nail dropped between channel and wall to separate same to permit wiring, and channels shall be secured to wall with 1½-inch cut stub nails.

b. Milcor Vertical Furring Channels shall be securely wired to horizontal Furring Channels by not less than three loops of No. 18 gauge galvanized annealed wire at each crossing.

6. ERECTION OF MILCOR METAL LATH.

Same as Article 6 of Specifications No. 5 — Metal Stud Partitions.

No. 8 — Milcor Standing Furring

Milcor Standing Furring shall have the same spacing of studs and same weight of lath as used for solid Metal Stud Partitions. Specifications No. 5.

No. 9 — Milcor Attached Ceilings Clipped to Steel Floor Beams

Or Suspended Less than 6 inches Below Terra Cotta Floors

NOTE: This specification can be adapted for use with attached ceilings under concrete joists and floors, other specifications for which are given in Specification No. 10.

NOTE: USE SPECIFICATION FOR SUSPENDED CEILINGS OR THE FOLLOWING:

1. SIZE AND WEIGHT OF FURRING CHANNELS AND HANGERS.

a. Where ceilings are attached to the floor beams or just under terra cotta floors, ¾-inch Milcor Cold Rolled Furring Channels weighing not less than 276 pounds per thousand lineal feet shall be securely wired or clamped to the lower flanges of the beams or to hangers of not less than No. 9 gauge galvanized wire, spaced not to exceed 2 feet centers along the channels. Transverse spacing of clamps, hangers, or other attaching devices shall correspond to that of channels as specified in Article 2 below.

2. WEIGHTS OF MILCOR METAL LATH.

Netmesh Expanded Metal Lath, for Furring Channels with a maximum spacing of 12 and 16 inches on centers, shall weigh not less than 3 pounds and 3.4 pounds per square yard, respectively. ⅜ Stay-Rib Lath No. 2 for furring channels with a maximum spacing of 19½, 24, and 30 inches on centers, shall weigh not less than 2.75, 3.5, and 4 pounds per square yard, respectively. Stay-Rib Lath No. 1 for furring channels with a maximum spacing of 16-inch centers shall weigh not less than 2.75 pounds per square yard.

3. TIE WIRE.

Tie Wire shall be not less than No. 18 gauge galvanized soft annealed.

4. ERECTION OF MILCOR FURRING CHANNELS.

Special clips are obtainable for clipping Milcor furring channel to steel beams. For terra cotta arches a hole shall be punched through the tile, the hanger inserted and held in place with a cross piece of steel rod, toggle bolt or other suitable anchor. The lower ends shall be twisted around or otherwise secured to the furring channels, which are thus brought into the proper height and position.

5. ERECTION OF MILCOR METAL LATH.

a. Milcor Metal Lath shall be applied with the long dimension of the sheet across the furring channels.

b. Sheets shall be wired to furring channels at intervals not exceeding 6 inches and a tie shall always occur where sides of sheets lap at channels. There shall be one tie on side laps half way between channels.

c. Netmesh Expanded Metal Lath shall be lapped at sides not less than ½ inch, and at ends not less than 1 inch. End laps of sheets should generally occur only over furring channels; if between studs, sheets shall be securely laced with No. 18 gauge galvanized annealed wire.

d. Stay-Rib Lath shall be lapped at sides by nesting outside ribs, and at ends, 1 inch. End laps shall be as in preceding paragraph.

No. 10 — Milcor Attached Ceilings Under Concrete Joists and Floors

Constructed with Milcor Steel Domes

NOTE: Construction outlined in Specifications No. 9 preceding, may also be adapted for attached ceilings under concrete joists and floors.

General and Erection

1. SIZE, SPACING AND ERECTION OF HANGERS — METHOD A.

a. Where ceiling is to be applied directly against the bottom of concrete joists, or suspended to a distance not exceeding 6 inches below the joists, hangers of not less than No. 9 gauge galvanized annealed wire shall be placed in the slab or beam before pouring concrete. A loop or other deformation shall be provided in each hanger to positively engage the concrete.

b. Hangers shall be spaced not to exceed 3 feet in direction parallel to the joists and not further apart in the transverse direction than the center to center distance of the joists, which shall in no case be more than 26 inches.

2. SIZE, WEIGHT, SPACING AND ERECTION OF FURRING CHANNELS AND RODS — WEIGHTS OF MILCOR METAL LATH — METHOD A.

a. Milcor Cold Rolled Channels not less than ¾ inch and weighing not less than 276 pounds per thousand lineal feet shall be attached to the hangers parallel to the joists. Such channels shall be spaced not to exceed the center to center distance of the concrete joists and in no case to exceed 26 inches.

b. Pencil Rods not less than ¼ inch in diameter shall be attached transversely to the furring channels by not less than three loops of No. 18 gauge galvanized annealed wire.

c. Pencil Rods shall be spaced not to exceed 11¾-inch centers for 3 pound Netmesh Expanded Metal Lath or 15¾-inch centers for 3.4 pound Expanded Metal Lath, or 16-inch centers for Stay-Rib Lath No. 1 or ⅜ Stay-Rib Lath No. 2 weighing not less than 2.75 pounds per square yard. Where ⅜ Stay-Rib Lath No. 2 weighing not less than 3 pounds per square yard is used, the Pencil Rods may be omitted.

3. SIZE, SPACING AND ERECTION OF HANGERS AND PENCIL RODS — WEIGHTS OF MILCOR METAL LATH — METHOD B.

a. In lieu of attachment to channels, Pencil Rods not less than ¼ inch in diameter shall be attached directly to wire hangers cast into the concrete joists. Pencil Rods shall be placed at right angles to the joists.

b. Hangers shall be not less than No. 14 gauge galvanized annealed wire and shall be spaced not to exceed 11¾-inch centers for 3 pound Netmesh Expanded Metal Lath, 15¾-inch centers for 3.4 pound Netmesh Expanded Metal Lath, or 16-inch centers for 2.75 pound Stay-Rib No. 1 or ⅜ Stay-Rib Lath No. 2.

c. Where ⅜ Stay-Rib No. 2 is used, the Pencil Rods may be omitted, but the ribs of the lath shall be placed at right angles to the joists.

4. ERECTION OF MILCOR METAL LATH—METHODS A AND B.

a. Milcor Metal Lath shall be applied with the long dimension of the sheet across the rods.

b. Sheets shall be wired to rods with No. 18 gauge galvanized annealed wire at intervals not exceeding 6 inches and a tie shall always occur where sides of sheets lap at rods. There shall be one tie on side laps half way between rods.

c. Netmesh Expanded Metal Lath shall be lapped at sides not less than ½ inch, and at ends not less than 1 inch. End laps of sheets should generally occur only over rods; if between rods, sheets shall be securely laced with No. 18 gauge galvanized annealed wire.

d. Stay-Rib Lath shall be lapped at sides by nesting outside ribs, and at ends, 1 inch. End laps shall be as in preceding paragraph.

No. 11 — Milcor Ceilings Directly Under Concrete Joists and Floors

Lath Placed on Forms Before Pouring Concrete

Methods of attachment and sizes and weights of the component parts of this form of construction shall be in accordance with our specifications on Milcor Steel Domes. See Specification No. 18 on page 63. Also see pages 37 to 46.

No. 12 — Milcor Suspended Ceilings

Suspended below the soffit of steel or concrete beams or purlins, or concrete or hollow tile floor arches.

1. HANGERS.

a. Minimum Size.

The minimum size for hangers shall be No. 8 galvanized wire, or 1 inch x 3/16 inch flat steel, or 7/32 inch round mild-steel rods.

b. Spacing.

Hangers shall be spaced not to exceed 4 feet center to center in both directions, excepting that hangers shall be spaced not to exceed 2 feet on centers along runner channels when ¾-inch runner channels weighing not less than 276 pounds per thousand lineal feet are used, as in Article 2*a* below.

2. RUNNER CHANNELS.

a. Minimum Size and Weight.

Runner Channels shall be not less than 1½-inch Milcor Cold Rolled Channels weighing not less than 456 pounds per thousand lineal feet, excepting when hangers are spaced not to exceed 2 feet on centers along runner channels, in which case ¾-inch Milcor Runner Channels weighing not less than 276 pounds per thousand lineal feet may be used; provided, however, that this construction is permissible only when ceiling is suspended less than 6 inches below beams, joists, etc.

b. Spacing.

Milcor Runner Channels shall be spaced not to exceed 4 feet on centers.

3. FURRING CHANNELS.

a. Minimum Size and Weight.

Furring Channels shall be not less than ¾-inch Milcor Cold Rolled Channels weighing not less than 276 pounds per thousand lineal feet.

b. Spacing.

Milcor Furring Channels shall be spaced in accordance with the weight of lath used, and shall not exceed 12-inch and 16-inch centers for 3 pound and 3.4 pound Netmesh Expanded Metal Lath, respectively, or be spaced to exceed 16-inch centers for 2.75 pound Stay-Rib No. 1 or ⅜ Stay-Rib Lath No. 2, or 24-inch and 30-inch centers for 3.5 and 4.1 pound ⅜ Stay-Rib Lath, respectively.

4. WEIGHTS OF MILCOR METAL LATH.

Milcor Metal Lath used for suspended ceilings shall have a weight of not less than 2.75 pounds per square yard; provided, however, that minimum weights shall in each case be governed by spacing of Milcor furring channels as specified in Article 3*b*, preceding.

5. TIE WIRE.

Tie Wire for attaching Milcor Metal Lath to Milcor Channels shall be not less than No. 18 gauge galvanized annealed wire.

Tie Wire used for securing furring channels to runner channels shall be not less than No. 16 gauge galvanized annealed wire.

6. ERECTION OF CHANNEL FRAME.

a. Attachment of Hangers to Beams, Purlins and Floors:

Upper ends of hangers of wire, rods or flats shall be of sufficient length to wrap around beams or provide a suitable anchorage in the concrete or tile. Where steel beams or purlins are not more than 4 feet center to center, hangers may be attached directly to them. When hangers are hung from concrete beams or arches, the hangers shall be placed before concrete is poured. When ceilings are hung from terra cotta floors, hangers shall be installed after the tile is in place. A hole shall be bored in the underside of the tile and the hanger inserted and securely anchored with either a cross piece of steel rod or toggle bolt, or the hanger may extend clear through the tile and be secured on the upper side by means of a steel rod or toggle bolt.

b. Attachment of Runner Channels to Hangers:

Lower end of each wire hanger shall be of sufficient length to wrap around the runner channels and be given three twists around itself. Lower end of each rod hanger shall be of sufficient length to wrap around the runner channel with two twists, or to be securely wired to same. Lower ends of flat steel hangers shall have holes punched at the proper distance, to which the runner channel shall be bolted with not less than ⅜-inch diameter bolts.

Milcor Runner Channels shall be firmly secured to the hangers as described, same spacing as in Article 2 of this section, and shall conform to the contour of the ceiling.

c. Attachment of Furring to Runner Channels:

Furring Channels shall be erected at right angles to the runner channel and be securely wired to same by at least six strands of No. 18 galvanized annealed wire at each crossing, or by No. 9 wire hair pin clips.

7. ERECTION OF MILCOR METAL LATH.

See Specifications No. 9, Article 5 — Attached Ceilings.

No. 13 — Milcor Metal Lathed Beams and Cornices

1. WEIGHTS OF MILCOR METAL LATH.

a. Netmesh Expanded Metal Lath, for beams and cornices where brackets are spaced 12 or 16 inches on centers, shall be not less than 2.5 and 3 pounds per square yard, respectively.

2. SIZE, WEIGHT AND SPACING OF BRACKETS.

Brackets shall be formed of ¾-inch Milcor Cold Rolled Channels weighing not less than 276 pounds per thousand lineal feet, or from 3/16 inch by 1 inch flat steel, and shall be spaced to conform with weight of lath as above.

3. SIZE, WEIGHT AND SPACING OF LONGITUDINAL CHANNELS OR RODS.

Longitudinal Channels or Rods shall be ¾-inch Milcor Cold Rolled Channels weighing not less than 276 pounds per thousand lineal feet, or ¼-inch Pencil Rods; and spacing of same shall be in accordance with dimensions of beam or cornice, but in no case to exceed 12 inches.

4. TIE WIRE.

Wire for tying brackets to structural members shall be not less than No. 18 gauge galvanized annealed wire, using 6 strands. For tying longitudinal rods to brackets, wire shall be not less than No. 16 gauge galvanized annealed wire, and for tying Milcor Metal Lath to rods or channels, wire shall be not less than No. 18 gauge galvanized annealed wire.

5. ERECTION OF BRACKETS, CHANNELS AND RODS.

a. Brackets shall be formed to template in accordance with details furnished by the architect. Brackets shall be securely wired, bolted or clamped to walls, ceilings or structural members, as the case may require, and be spaced as in Article 2 above. For fastening brackets to concrete or masonry beams or walls, holes shall be drilled and plugged; when fastening to terra cotta, toggle bolts or suitable anchor shall be used.

b. Milcor Longitudinal Channels or Rods shall be wired or bolted to brackets.

6. ERECTION OF MILCOR METAL LATH.

a. Milcor Metal Lath shall be applied with the long dimension of the sheet running parallel to the longitudinal channels or rods and shall be bent into and made to conform with the outline of the finished beam or cornice. Side laps shall not occur at the corners, but shall be used at all corners.

b. Side laps on sheets shall be ½ inch and end laps 1 inch. Side laps shall be wired once between channels, and end laps shall be securely laced with No. 18 gauge galvanized annealed wire.

No. 14 — Milcor Metal Lathed Columns and Pilasters

1. WEIGHTS OF MILCOR METAL LATH.

a. Netmesh Expanded Metal Lath, where vertical members of framing are spaced not to exceed 12 or 16 inches, shall weigh not less than 2.5 and 3 pounds per square yard, respectively.

b. ⅜ Stay-Rib No. 2 or Stay-Rib Lath No. 1, where vertical framing members are spaced not to exceed 19½, 24 and 30 inches on centers, shall weigh not less than 2.75 and 3.5 pounds per square yard.

2. WEIGHTS OF VERTICAL FRAMING MEMBERS.

Vertical framing members shall be ¾-inch Milcor Cold Rolled Channels weighing not less than 276 pounds per thousand lineal feet and shall be bracketed every 3 feet of their vertical height with similar ¾-inch Milcor Channels or with 3/16 inch by 1 inch flat steel.

3. TIE WIRE.

Wire for tying brackets to vertical members shall be not less than No. 18 gauge galvanized annealed wire.

Wire for attaching the lath to the vertical members shall be not less than No. 18 gauge galvanized annealed wire.

4. ERECTION OF BRACKETS AND FRAMING MEMBERS.

a. Hoops or brackets conforming to details furnished by the architect shall be securely attached to steel members with clamps; or by wiring with No. 18 gauge galvanized annealed wire with 6 strands at each tie; or with No. 9 wire hair pin clips, and to masonry or tile by drilling holes and plugging.

b. Vertical framing shall be securely wired or bolted to brackets or hoops with not less than ⅜-inch diameter bolts, and shall be securely clamped or wired to structural members at floor and ceiling.

5. ERECTION OF MILCOR METAL LATH.

a. Milcor Netmesh Metal Lath shall be bent to the outline of column or pilaster, long dimension of the sheet at right angles to the vertical framing, and securely wired thereto.

Netmesh Metal Lath shall be bent up on the ceiling or No. 2 Expansion Corner Bead shall be used at the ceiling corners. — See pages 24, 25 and 55.

b. Sides of sheets shall be lapped 1 inch, or, in the case of Stay-Rib Lath, by nesting outside ribs and be securely laced the full length of the lap with No. 18 galvanized annealed wire. Ends of sheets shall be lapped 1 inch and shall not occur at corners.

No. 15 — Milcor Corner and Jamb Reinforcement in Block Partition Construction

1. CORNER REINFORCEMENT. — Refer to pages 24, 25 and 55.

Wherever gypsum or clay tile partitions abut and where tile partitions or walls join ceilings constructed of tile or concrete, Milcor Expansion Corner Beads No. 1 or No. 2 shall be secured to the tile or concrete before plastering, to reinforce the plaster and prevent corner cracks.

2. JAMB REINFORCEMENT.

Plaster around openings in block partitions shall be reinforced by wide strips of Netmesh Expanded Metal Lath cut from sheets weighing not less than 2.35 pounds per square yard and shall extend beyond the jamb about 12 inches.

See pages 26 to 29 for adaptations of Milcor Expansion Casings.

No. 16 — Milcor Metal Lath in Steel Joist Construction

1. WEIGHTS OF MILCOR METAL LATH.

a. Netmesh Expanded Metal Lath used on the upper-floor-side of steel joists — or metal lumber — with a maximum spacing of 16 inches and 12 inches, shall weigh not less than 3.4 pounds and 3 pounds per square yard, respectively.

b. ⅜ Stay-Rib Lath No. 2 used on the upper-floor-side of steel joists, with a maximum spacing of 24 inches, shall weigh not less than 4 pounds per square yard.

c. Netmesh Expanded Metal Lath for ceilings attached in contact with the lower flanges of steel joists with a maximum spacing of 16 inches and 12 inches shall weigh not less than 3.4 pounds and 3 pounds per square yard, respectively. ⅜ Stay-Rib No. 2 Lath used for the same purpose, for joists with a maximum spacing of 19½, 24 and 30 inches on centers, shall weigh not less than 3.5 and 4 pounds per square yard. Stay-Rib Lath No. 1 for steel joists with a maximum spacing of 16-inch centers, shall weigh not less than 2.75 pounds per square yard.

2. SUSPENDED CEILING UNDER STEEL JOISTS.

When a Milcor Metal Lath ceiling is suspended under steel joists, it shall conform to the usual Specifications for suspended ceilings. See Specifications No. 12.

3. ATTACHMENTS FOR CEILING LATH.

Milcor Ceiling Lath shall be attached to steel joists at not to exceed 6-inch centers in the manner recommended by the manufacturers of the steel joists.

No. 17 — Alternate Milcor Specifications for Dwellings

Plastering specifications for all residences in which wood lath predominates, shall call for Milcor Metal Lath as follows:

1. NETMESH OR STAY-RIB METAL LATH OVER THE HEATING PLANT AND FUEL STORAGE.

That portion of the basement ceiling directly over the heating plant and fuel storage and extending 3 feet beyond the outlines thereof and that portion of such ceiling over hot air and smoke pipes shall be protected by Milcor Metal Lath and plaster.

2. BATHROOM WAINSCOT.

The entire bathroom wainscot shall be lathed with Stay-Rib or Netmesh Expanded Metal Lath — whether for tile backing or for plaster. Refer to page 23.

In addition to the above, contractors shall submit bids on the following two alternates:

Alternate 1

FURNISH AND INSTALL —

1. Stay-Rib or Netmesh Expanded Metal Lath on the ceilings of the living room, dining room, entry hall, and around and under the stairs and stairwell where exposed to view from the main floor.

2. No. 1 and No. 2 Expansion Corner Bead shall be applied over wood lath in the corners of the living room, dining room and stair hall — to prevent corner cracks — wherever wood lath or any other type of wall construction is used. Refer to pages 24, 25 and 55.

Alternate 2

In addition to the preceding — FURNISH AND INSTALL —

1. Netmesh Expanded Metal Lath or Stay-Rib Lath for the walls of the living room, dining room and entry hall.

2. Milcor Metal Lath for the balance of the basement ceiling. Refer to page 55.

Weights and Attachments for Milcor Metal Lath

NOTE: Minimum weights of Milcor Metal Lath specified above shall be as follows:

For walls and partitions, 2.35 pounds per square yard, and for ceilings, 3 pounds per square yard for Netmesh Lath; or 2.75 pounds per square yard for Stay-Rib Lath.

Milcor Metal Lath shall be attached to wood studs and wood joists by not less than 6d nails or by equivalent staples.

No. 18 — Milcor Steel Dome Floors

The steel forms for forming the rib slabs or joist construction shall be 26 gauge MILCOR Steel Domes manufactured by the Milwaukee Corrugating Co., Milwaukee, Wis. These to be of such height as called for on drawings and to be spaced in accordance with structural details.

The Steel Domes shall be nailed lightly to the centering through the flanges provided in order to prevent displacement while concrete is being poured.

In cases where ceilings are required directly under the concrete joists, MILCOR STAY-RIB Metal Lath No. 1 or Milcor ⅜ Stay-Rib No. 2, weighing not less than 3.50 lbs. per square yard, painted, or not less than 3.60 lbs. per square yard if cut from galvanized sheets, manufactured by the Milwaukee Corrugating Co., shall be placed on wood forms before placing the Milcor Steel Domes and shall be securely tied to the reinforcing steel in order to provide permanent attachment.

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MILWAUKEE CORRUGATING COMPANY

Manufacturers of
High-grade Sheet Metal Products, including in addition to the products featured in this manual, the following:
Art Metal Shingles — Metal Tile Roofing — Skylights — Ventilators
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MEYER-ROTIER PRINTING CO., MILWAUKEE

LIST PRICES

EFFECTIVE SEPT. 2, 1924

Covering MILCOR Products

Write for Discounts

MILCOR No. 100 Window Stool, 20 gauge, 3⅞ inch reveal			$260.00	M Ft.
For each additional inch of reveal or fraction thereof add			31.00	"
MILCOR No. 100 Window Stool, 18 gauge, 3⅞ inch reveal			325.00	"
For each additional inch of reveal or fraction thereof add			43.00	"
MILCOR No. 100 Window Stool Corner Fittings up to 3⅞ inch reveal	each	$0.32		
MILCOR No. 100 Window Stool Corner Fittings from 3⅞ inch reveal to 10 in.	each	.65		
MILCOR No. 101 Window Stool, 20 gauge, 3⅞ inch reveal			288.00	"
For each additional inch of reveal or fraction thereof add			38.00	"
MILCOR No. 101 Window Stool, 18 gauge, 3⅞ inch reveal			350.00	"
For each additional inch of reveal or fraction thereof add			50.00	"
MILCOR No. 102 Flat Window Stool, 20 gauge, 3⅞ inch reveal			275.00	"
For each additional inch of reveal or fraction thereof add			31.00	"
MILCOR No. 102 Flat Window Stool, 18 gauge, 3⅞ inch reveal			340.00	"
For each additional inch of reveal or fraction thereof add			43.00	"
MILCOR No. 110, 4 inch, 20 gauge Base			260.00	"
MILCOR No. 110, 4 inch, 18 gauge Base			335.00	"
MILCOR No. 110, 6 inch. 20 gauge Base			325.00	"
MILCOR No. 110, 6 inch, 18 gauge Base			440.00	"
MILCOR No. 112, 4 inch, 20 gauge Base			300.00	"
MILCOR No. 112, 4 inch. 18 gauge Base			375.00	"
MILCOR No. 112, 6 inch, 20 gauge Base			360.00	"
MILCOR No. 112, 6 inch, 18 gauge Base			480.00	"
MILCOR No. 114, 4 inch, 20 gauge Base			265.00	"
MILCOR No. 114, 6 inch, 20 gauge Base			330.00	"
MILCOR No. 116, 4 inch, 20 gauge Base			185.00	"
MILCOR No. 116, 6 inch, 20 gauge Base			235.00	"
MILCOR No. 125 Chalk Trough			310.00	"
MILCOR No. 125 Chalk Trough End Stops	each	.23		
MILCOR No. 121 Mould			125.00	"
MILCOR No. 130 Chair Rail			235.00	"
MILCOR No. 130 Chair Rail End Stops	each	.12		
MILCOR Corners, End Stops and Plinths for all Bases 4 inches high	each	.25		
MILCOR Corners End Stops and Plinths for all Bases 6 inches high	each	.28		
MILCOR Plinth Blocks for Wood Casings	each	.37		
MILCOR Mitre Box Saw	each	16.00		
MILCOR Mitre Box Saw Blades	per dozen	5.00		
MILCOR Punch Block	each	13.00		

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Fireproof Material Department
MILWAUKEE - WISCONSIN

Kansas City, Mo. LaCrosse, Wis. Minneapolis, Minn. Chicago, Ill. Little Rock, Ark. Boston, Mass.

6M 11-3-24

Supplement to

The MILCOR MANUAL

BULLETIN NO. 20-A

including

Milcor Curved Metal Window Stools
Milcor Splay Metal Window Stools
Milcor Flat Metal Window Stools
Milcor Flush Metal Cove Base
Milcor Metal Cove Base
(With Cove Base Fittings)
Milcor Removable Base and Fittings
Milcor Metal Chalk Rails
Milcor Metal Chair Rails

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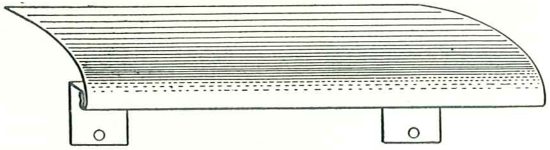
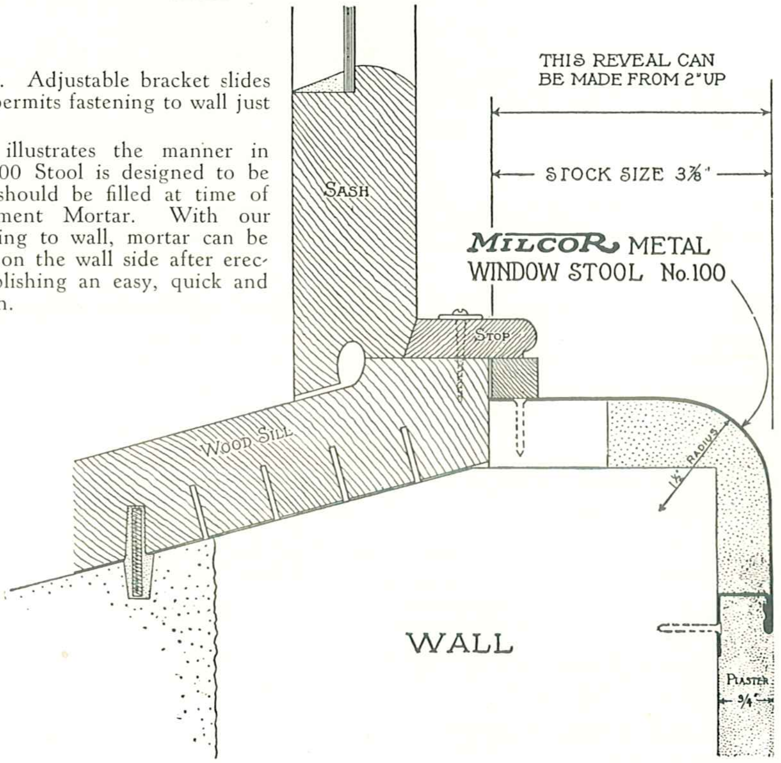
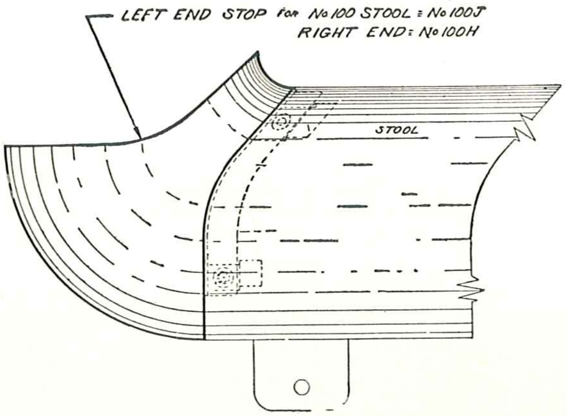


Special Feature. Adjustable bracket slides in groove which permits fastening to wall just where desired.

This drawing illustrates the manner in which our No. 100 Stool is designed to be installed. Stool should be filled at time of setting with Cement Mortar. With our method of attaching to wall, mortar can be filled under stool on the wall side after erection, thus accomplishing an easy, quick and perfect installation.



MILCOR
Curved Metal Window Stool No. 100



These end stops are used when the No. 100 stool and plaster head and jambs are desired. They form a clean cut and pleasing connection between the stool and jambs.

Milcor Metal Window Stools make an inexpensive, fireproof, sanitary, and durable installation.

As a general rule we recommend 18 gauge metal for stools with a reveal wider than 3⅞" or when stool is longer than 5 feet.

These stools are cut to the required length from the nearest stock length, necessary fittings attached, crated, and shipped ready to set in place.

No. 100 Curved Metal Window Stool. Made of 18 or 20 Gauge Special tight coated Galvanized Sheet Steel.

Stock reveal. 3⅞" Standard but can be furnished in any size from 2" up.

Lengths to 10 feet without splice.

Stock lengths from 2 feet up in multiples of 6 inches.

Stool furnished in ½-in., ⅝-in. or ¾-in. Ground as desired.

All exposed surfaces primed with our special primer.

Weight 18 gauge, 3⅞-in. reveal, approximately 1153 pounds per M feet crated. Add 180 lbs. per M feet for each additional inch of reveal.

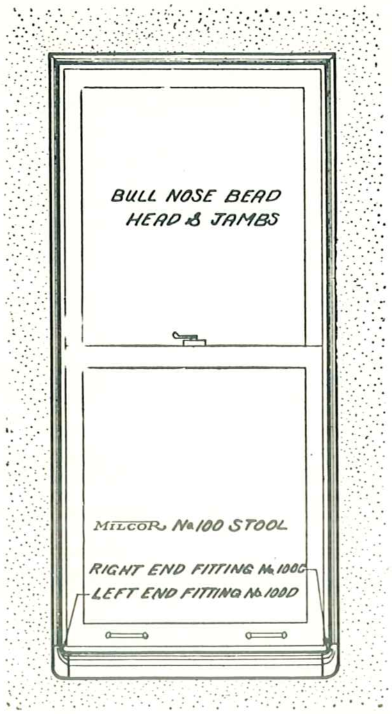
Weight 20 gauge, 3⅞-in. reveal, approximately 903 pounds per M feet crated. Add 138 lbs. per M feet for each additional inch of reveal.

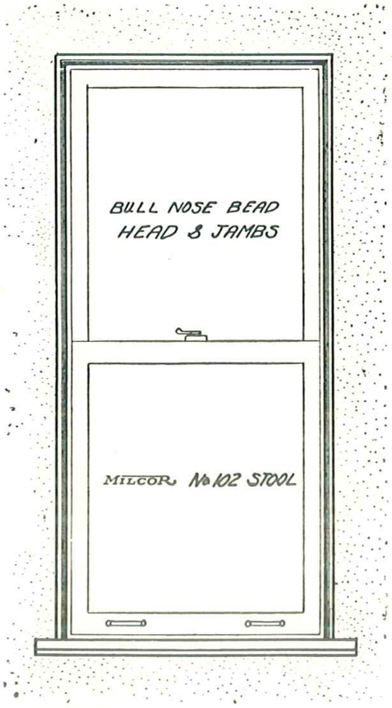
Loop anchors attached to under side of Stool for use in cement grout when fireproof construction is desired.

This illustration shows Milcor No. 100 stool used in connection with ¾″ Radius Bull Nose Bead head and jambs which makes a first class installation at a reasonable cost. The corners between stool and jambs are made neat and trim with our special fitting for this purpose. The corners between head and jambs are formed by mitreing the Bull Nose Bead.

Right End Fitting for No. 100 stool and 1½″ radius Bull Nose Bead is No. 100E.

Left End Fitting for No. 100 stool and 1½″ radius Bull Nose Bead is No. 100F.





This shows the effect of our No. 102 Stool with Bull Nose Bead, head and Jambs. It makes an ideal trim for window openings of this design. No fittings are used for this arrangement, the jambs resting on the flat surface of the stool and mitred to fit the head. This stool projects ½″ from the wall line and 1½″ beyond the finished jamb. The openings at the ends are fitted with steel closures at the factory.

MILCOR
Splay Metal Window Stool No. 101

No. 101 Splay Window Stool is made of 18 or 20 gauge Special Tight Coated Galvanized Steel.

Stock Reveal 3⅞″ standard but can be furnished in any size from 2″ up.

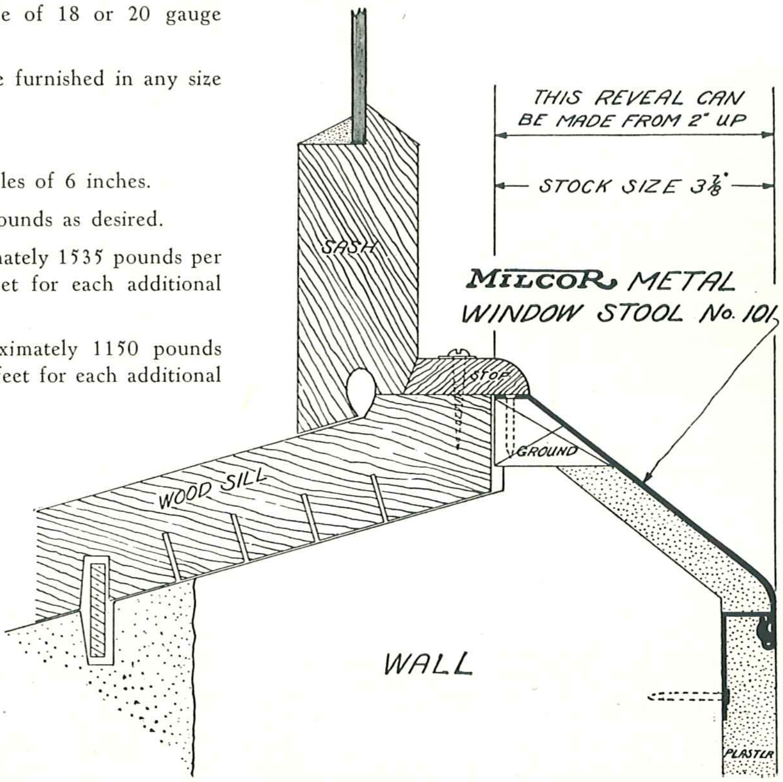
Lengths to 10 feet without splice.

Stock lengths from 2 feet up in multiples of 6 inches.

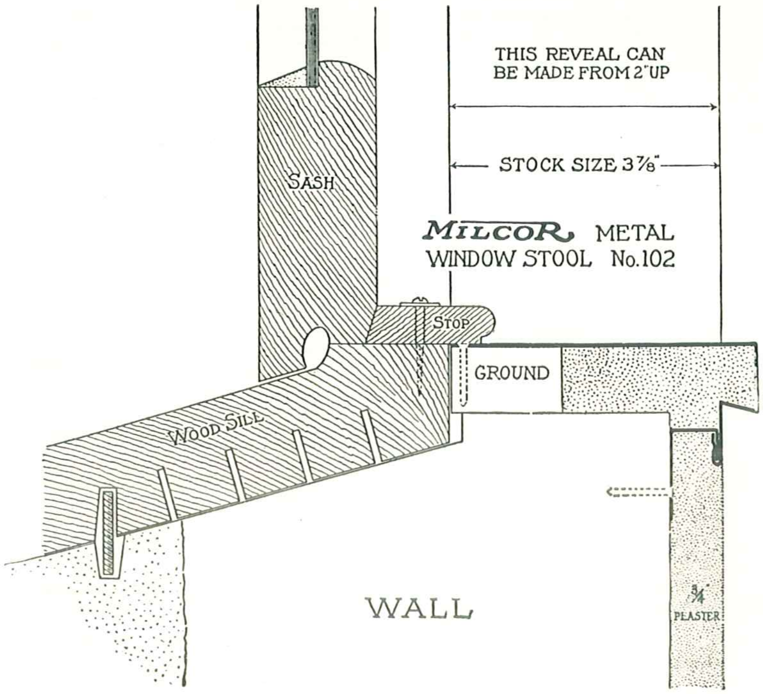
Stool furnished in ½″, ⅝″, or ¾″ grounds as desired.

Weight 18 gauge 3⅞″ reveal, approximately 1535 pounds per M feet crated. Add 230 lbs. per M feet for each additional inch of reveal.

Weight 20 gauge 3⅞″ reveal, approximately 1150 pounds per M feet crated. Add 175 lbs. per M feet for each additional inch of reveal.



Special feature. Adjustable bracket slides in groove which permits fastening to wall just where desired. The above illustration shows the manner in which this stool should be installed. Used where general splay effect is desired.


THIS REVEAL CAN BE MADE FROM 2″ UP
STOCK SIZE 3⅞″
MILCOR METAL WINDOW STOOL No.102
SASH
STOP
GROUND
WOOD SILL
WALL
¾ PLASTER

MILCOR
Flat Metal Window Stool No. 102

No. 102 Flat Window Stool. Made of 18 or 20 Gauge Special tight coated Galvanized Sheet Steel.

Stock Reveal. 3⅞″ Standard but can be furnished in any size from 2″ up.

Lengths to 10 feet without splice.

Stock lengths from 2 feet up in multiples of 6 inches.

Stool furnished in ½″, ⅝″ or ¾″. Ground as desired.

Weight 18 gauge, 3⅞″ reveal, approximately 1332 pounds per M feet crated. Add 180 lbs. per M feet for each additional inch of reveal.

20 gauge, 3⅞″ reveal, approximately 1040 pounds per M feet crated. Add 138 lbs. per M feet for each additional inch of reveal.

Closures for ends furnished without extra charge.

All exposed surfaces primed with our special primer.

Loop anchors attached to under side of stool for use in cement grout when fireproof construction is desired.

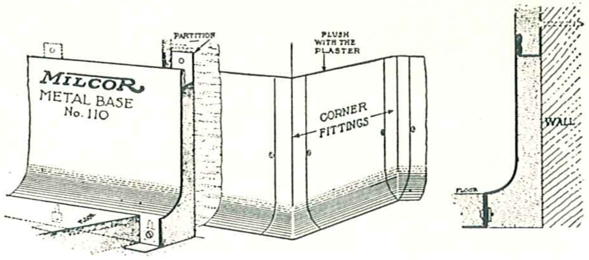
Special Features

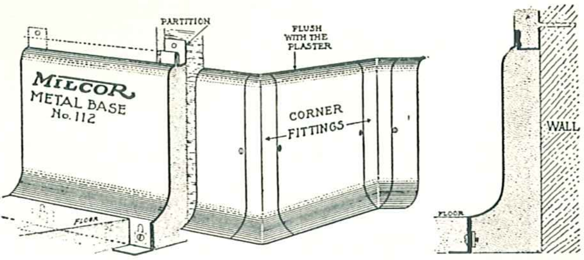
Special Feature. Adjustable bracket slides in groove which permits fastening to wall just where desired.

Stool should be filled at time of setting with cement mortar. With our method of attaching to wall, mortar can be filled under stool on the wall side after erection thus accomplishing an easy, quick, and perfect installation.

This cut illustrates the manner in which Milcor No. 102 Flat Stool is designed to be installed.

Where Flat Stool is desired this makes a very good substantial installation.





MILCOR
Flush Metal Cove Base Nos. 110 and 112

Made of 18 or 20 Gauge Special tight coated Galvanized Sheet Steel.

Used in connection with Cement Composition or Wood Floors.

No. 110 Base made in 10-foot lengths. Special lengths to order. Height four and six inches.

All fittings are simple to attach by use of machine screws which we furnish.

Necessary tools for erection of Base rented at nominal charge.

Detailed instructions furnished the contractor for properly installing Base.

The exposed surface of Base is primed with our special primer, which gives a flat finish suitable for any type of decorative finish.

Our Method of attaching Base to construction permits of grouting Base in back after erection without use of grouting can or buttering of mortar on back before erection, thus accomplishing an easy, quick and perfect installation.

Special Features — Adjustable bracket, slides in groove making it easy to fasten to construction just where desired. Also slot feature to allow for settling of floors, thus preventing crack in wall at top of Base.

Standard Fittings for Milcor No. 110 Cove Base

	4″ High	6″ High
Inside square corner	No. 110A	No. 110A6
Outside square corner	No. 110B	No. 110B6
Inside round corner ¾″ radius	No. 110C	No. 110C6
Inside round corner 1½″ radius	No. 110D	No. 110D6
Outside round corner ¾″ radius	No. 110E	No. 110E6
Outside round corner 1½″ radius	No. 110F	No. 110F6
Right end stop	No. 110H	No. 110H6
Left end stop	No. 110J	No. 110J6
Right plinth for No. 137 casing	No. 110K	No. 110K6
Left plinth for No. 137 casing	No. 110L	No. 110L6
Right plinth for No. 138 and No. 141 casing	No. 110M	No. 110M6
Left plinth for No. 138 and No. 141 casing	No. 110N	No. 110N6
Right plinth for No. 139 and No. 140 casing	No. 110P	No. 110P6
Left plinth for No. 139 and No. 140 casing	No. 110R	No. 110R6
Right plinth block 4¼″ wide	No. 110S	No. 110R6
Left plinth block 4¼″ wide	No. 110T	No. 110T6
Right plinth block 5¼″ wide	No. 110U	No. 110U6
Left plinth block 5¼″ wide	No. 110V	No. 110V6

Milcor Metal Cove Base No. 112

Same as No. 110 Base except that top of Base has a convex Mold.

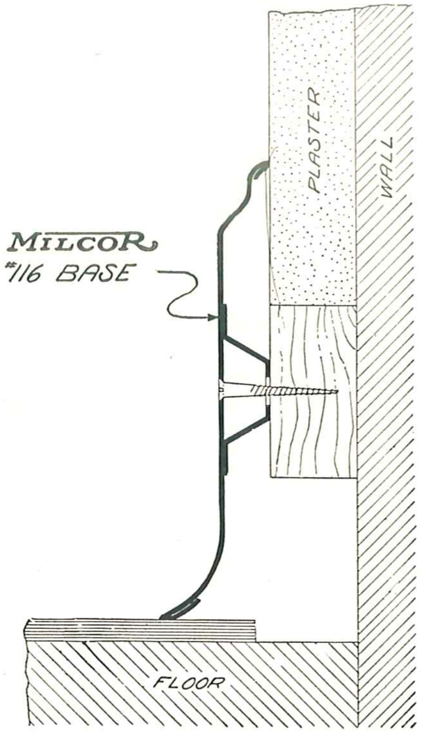
	Approximate Weight per 1000 Feet, Crated
No. 110, 4″, 18 gauge	1055 pounds
No. 110, 4″, 20 gauge	826 pounds
No. 110, 6″, 18 gauge	1397 pounds
No. 110, 6″, 20 gauge	1135 pounds
No. 112, 4″, 18 gauge	1275 pounds
No. 112, 4″, 20 gauge	990 pounds
No. 112, 6″, 18 gauge	1585 pounds
No. 112, 6″, 20 gauge	1350 pounds
Fittings	¾ pound each

Standard Fittings for Milcor No. 112 Cove Base

	4″ High	6″ High
Inside square corner	No. 112A	No. 112A6
Outside square corner	No. 112B	No. 112B6
Inside round corner ¾″ radius	No. 112C	No. 112C6
Inside round corner 1½″ radius	No. 112D	No. 112D6
Outside round corner ¾″ radius	No. 112E	No. 112E6
Outside round corner 1½″ radius	No. 112F	No. 112F6
Right end stop	No. 112H	No. 112H6
Left end stop	No. 112J	No. 112J6
Right plinth for No. 137 casing	No. 112K	No. 112K6
Left plinth for No. 137 casing	No. 112L	No. 112L6
Right plinth for No. 138 and No. 141 casing	No. 112M	No. 112M6
Left plinth for No. 138 and No. 141 casing	No. 112N	No. 112N6
Right plinth for No. 139 and No. 140 casing	No. 112P	No. 112P6
Left plinth for No. 139 and No. 140 casing	No. 112R	No. 112R6

MILCOR
Removable Metal Base No. 116

Milcor No. 116 Base, as here shown, is of the removable type. It is applied after the plaster and flooring and requires a wooden plaster ground for attachment. It is equipped with a continuous metal backing strip giving it an even and firm support at the point of attachment.



Only one ground is required on both the 4″ and 6″ base.

Furnished in 20 gauge Special Tight Coated Galvanized Sheet Steel. Height 4″ and 6″.

Stock length 10 feet. Special lengths to order.

Weight 4″, approximately 875 pounds per M feet crated.

Weight 6″, approximately 1080 pounds per M feet crated.

Necessary tools rented for erection when desired.

Detail instructions for proper erection furnished contractor.

The exposed surface of base is primed with our special primer, which gives a flat finish suitable for any type of decorative work.

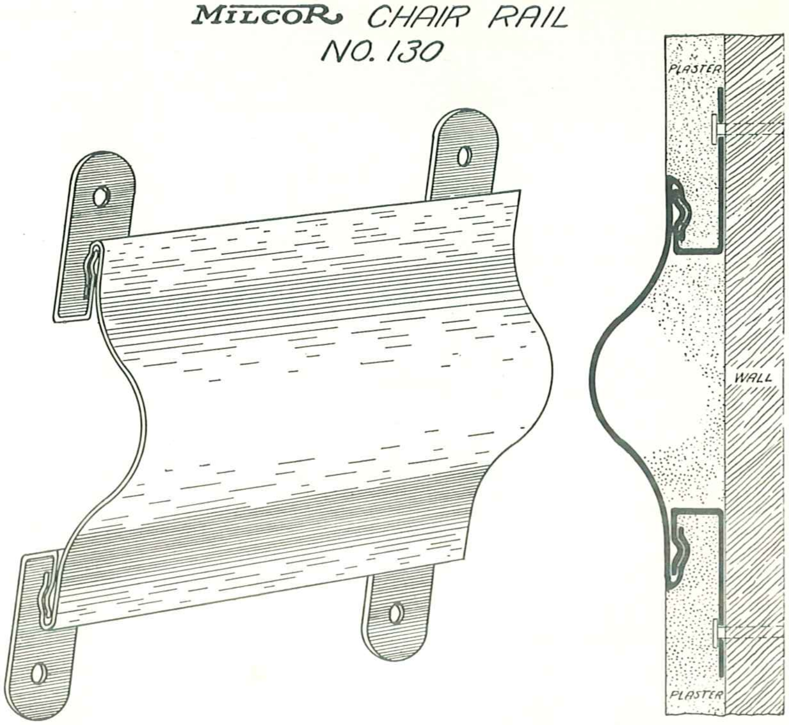
Detail instructions for proper erection furnished contractor.

The exposed surface of base is primed with our special primer, which gives a flat finish suitable for any type of decorative work.

Standard Fittings for Milcor No. 116 Removable Base

	4″ High	6″ High
Inside square corner....................	No. 116A	No. 116A6
Outside square corner..................	No. 116B	No. 116B6
Inside round corner ¾″ radius.......	No. 116C	No. 116C6
Inside round corner 1½″ radius.......	No. 116D	No. 116D6
Outside round corner ¾″ radius.......	No. 116E	No. 116E6
Outside round corner 1½″ radius.......	No. 116F	No. 116F6
Right end stop........................	No. 116H	No. 116H6
Left end stop..........................	No. 116J	No. 116J6
Right plinth for No. 137 casing........	No. 116K	No. 116K6
Left Plinth for No. 137 casing..........	No. 116L	No. 116L6
Right plinth for No. 138 and 141 casing	No. 116M	No. 116M6
Left plinth for No. 138 and No. 141 casing	No. 116N	No. 116R6
Right plinth for No. 139 and 140 casing	No. 116P	No. 116N6
Left plinth for No. 139 and 140 casing..	No. 116R	No. 116P6

It will readily be seen that these lists comprise a complete supply of fittings for all ordinary uses in connection with base, namely square and round corners, end stops, and plinths for connecting each base with each casing or a wooden casing. Nevertheless we are glad to cooperate in the designing of other fittings that may be more suitably adapted to special conditions and are equipped to produce same with a minimum of delay.



MILCOR Metal Chair Rail No. 130

The No. 130 Chair Rail also employs our sliding bracket arrangement for attachment. This makes it possible to nail at convenient points on about 12-inch centers and leaves ample openings for quick and easy grouting after erection.

Made of 20 gauge Special Tight Coated Galvanized Steel.

Stock lengths 10 feet. Special lengths to order.

Weight approximately 710 pounds per M feet crated.

Our end stops which return the chair rail to finished wall surface should be used at the ends of each run.

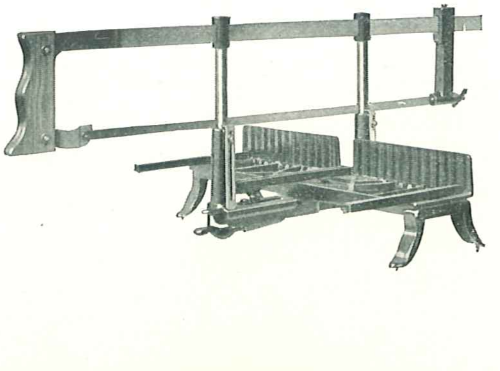
Right end stop is No. 130A. Left end stop is No. 130B.

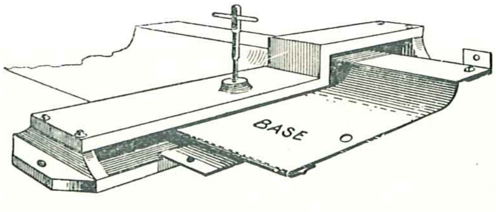
Simple to Install

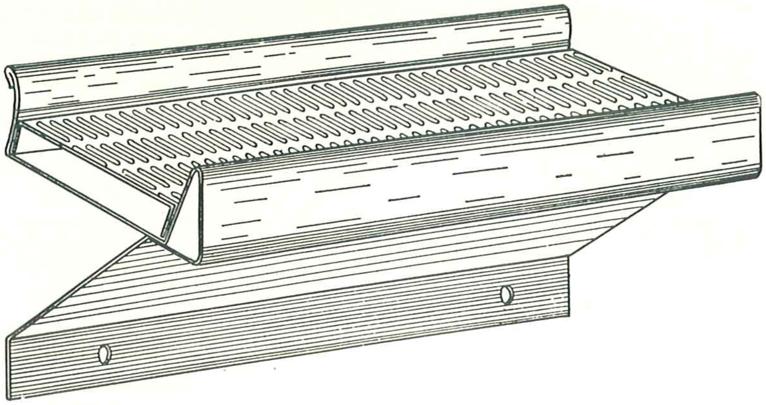
The only tools necessary for installing our product that are not included in the regular equipment of every mechanic are a mitre box saw and punching tool as shown below.

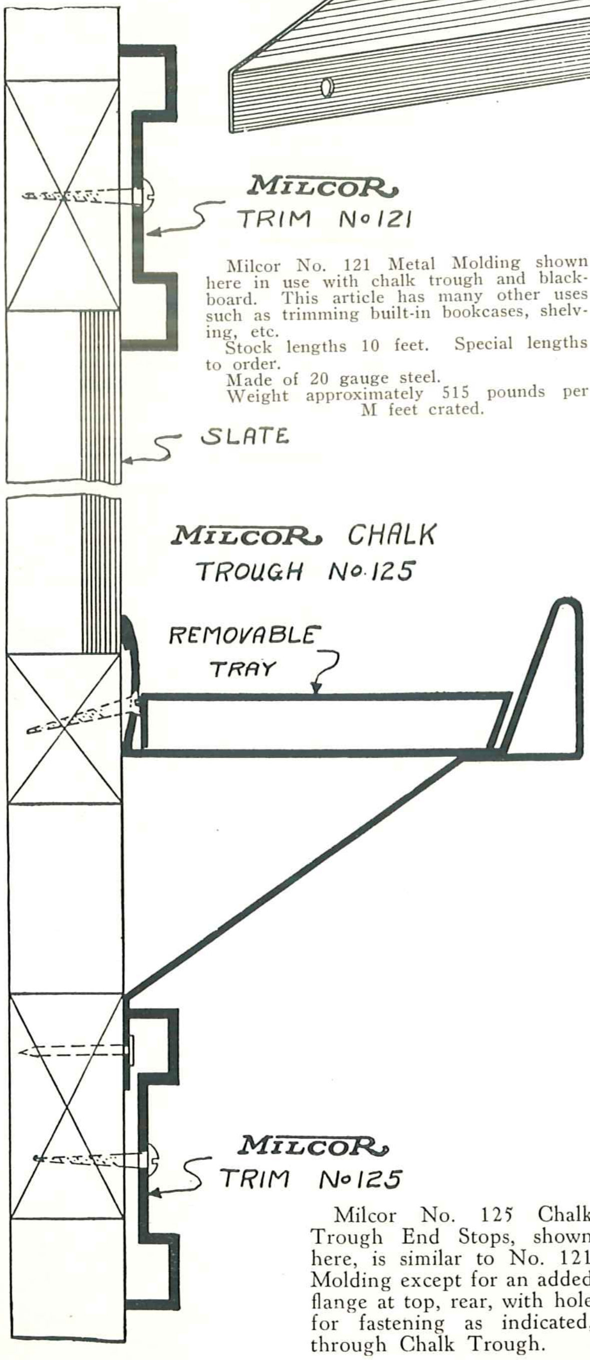
This mitre box saw, although designed especially for use in connection with our base, corner bead and casing, can be conveniently used for a great many things in connection with building.

The punching tool is used in connection with the base. It makes a very simple and easy method for punching the necessary holes to attach fittings.









Milcor No. 121 Metal Molding shown here in use with chalk trough and blackboard. This article has many other uses such as trimming built-in bookcases, shelving, etc.

Stock lengths 10 feet. Special lengths to order.

Made of 20 gauge steel.

Weight approximately 515 pounds per M feet crated.

Milcor No. 125 Chalk Trough End Stops, shown here, is similar to No. 121 Molding except for an added flange at top, rear, with hole for fastening as indicated, through Chalk Trough.

MILCOR
Chalk Trough No. 125

The Milcor No. 125 Chalk Trough is made of 24 gauge sheet steel. It can be firmly attached to the wall with wood screws as shown in the illustration. The perforated tray is removable for cleaning purposes. It makes a strong, sanitary and attractive appearing installation for use in connection with all blackboards.

Stock lengths 10 feet. Special lengths to order.

Weight 1440 pounds per M feet crated.